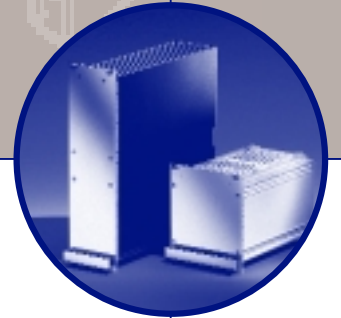
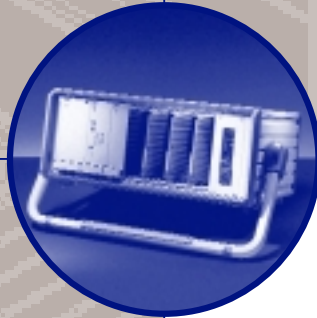


Subracks, Cases and Plug-In Units

Schroff[®]

2





Case 2.10.0

Subrack 2.20.0

europacPRO 2.21.0

europacPRO

integral 2.22.0

europac 2.30.0

europac rational 2.31.0

europac lab 2.32.0

europac mobile 2.33.0

europac special 2.34.0

europac lab HF 2.35.0

europac

accessories 2.36.0

metripac 2.40.0

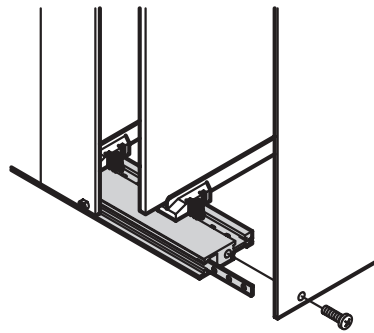
19" chassis 2.50.0

Modules 2.60.0

Accessories 2.70.0

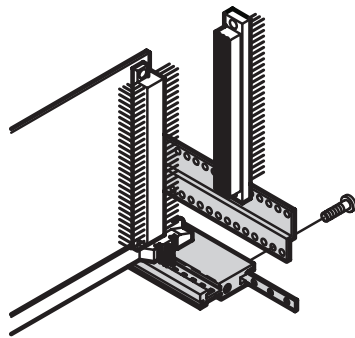
Appendix 2.80.0

Version front



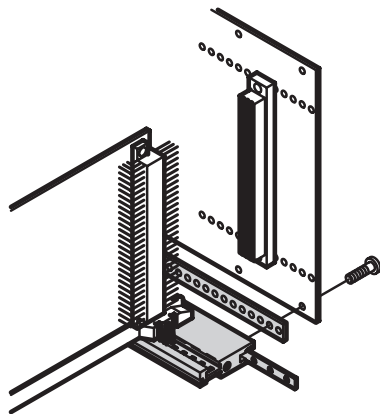
BZA45045

Version rear
for single plug connectors



BZA45046

Version rear
for backplanes



BZA45047

Horizontal Rails Information

- For installation in subrack and system case
- Create the mounting dimensions according to IEC 60297-3
- Installation of euroboards, plug-in units, frame-type 5 plug-in units and box-type plug-in units
- Mounting options for front panels, board retainers, connectors and backplanes

Design, material, finish

All horizontal rails are made from aluminium extrusions and are available for normal mounting widths.

Other sizes can be cut to length.

Finishes that are available:

- anodised with untreated cut surfaces
- clear chromated (electrically conductive)

Selection

The selection tables below show the application and required rail types.

Colour = Position

violet = top, green = bottom, red = centre, orange = vertical support member

Letter = Type of rail

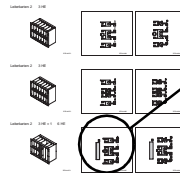
Letter	Type of rail	Page
A–D	Horizontal rails front	2.36.4
E	Support member	2.36.18
F–K	Horizontal rails rear	2.36.6
L–N	Central rails rear	2.36.8
Q–S	Z and perforated rails rear	2.36.11
D	Insulation strip	2.36.12

There is a choice of several versions for some rails. For mixed versions, lower case letters stand for short rails (e. g. 40 HP).

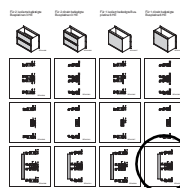
Example

Requirement: Installation of euroboards 100 × 160 mm (3 U) and 233.35 × 160 mm (6 U) in a 6-U subrack.

Cards are to be wired using two directly assembled backplanes 3 U.



Front required:
– 2 horizontal rails "A"
– 1 horizontal rail "c"
(shortened)
– 1 support member "E"



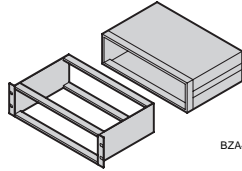
Rear required:
– 2 horizontal rails "H"
– 1 double module rail "f"
(shortened)
– 1 central rail "M"
– 1 support member "E"



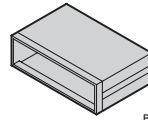
Selection of Horizontal Rails Front

For subracks
and cases

Only for
propac-case
cardpac-case
compac-case



BZA45121

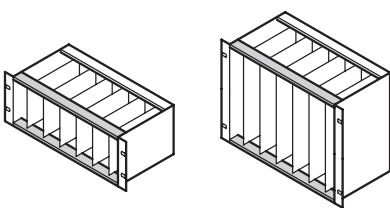


BZA45122

Printed circuit boards

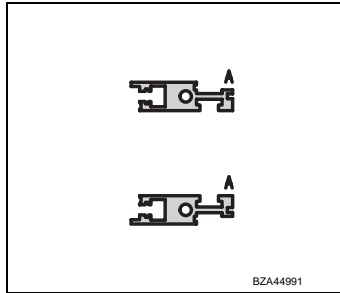
3 U

6 U

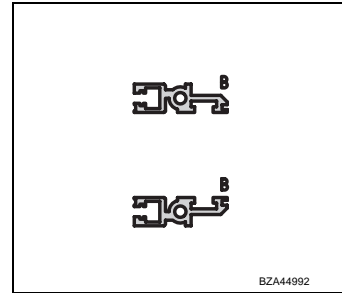


BZA44980

BZA44974

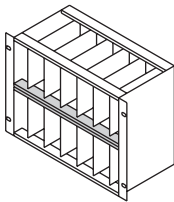


BZA44991

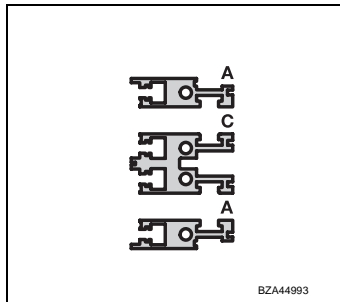


BZA44992

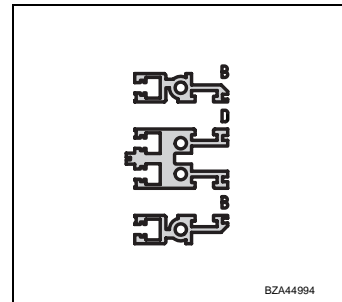
Printed circuit boards: 2 × 3 U



BZA44972

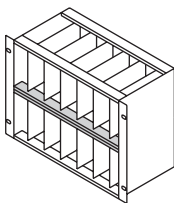


BZA44993

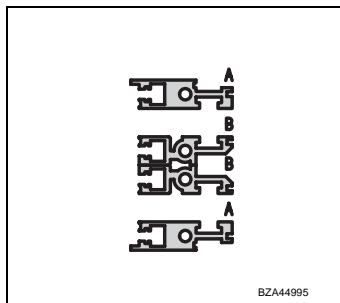


BZA44994

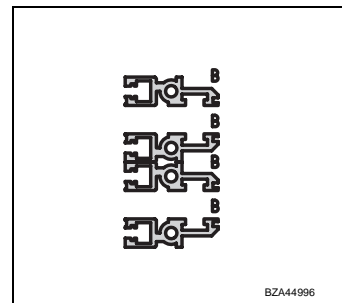
Printed circuit boards: 2 × 3 U



BZA44972

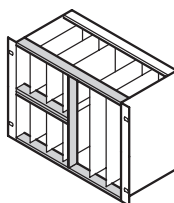


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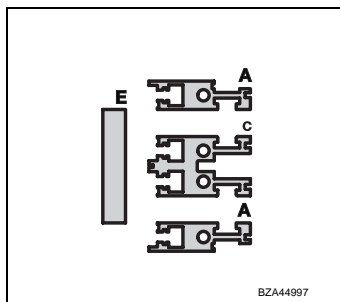


BZA44996

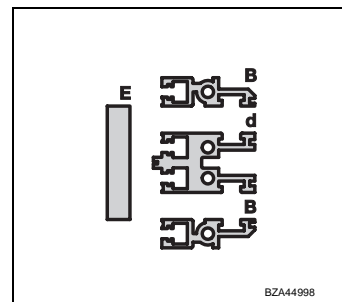
Printed circuit boards: 2 × 3 U + 1 × 6 U



BZA44973



BZA44997



BZA44998

Horizontal Rails	
Information	2.36.0
Horizontal Rails	
Front	2.36.4
Horizontal rail for HL	
handle	2.36.6
Horizontal Rails	
Rear/Central	2.36.6
Z and perforated	
rails	2.36.11
T – Insulation	
Strip	2.36.12
Threaded inserts	2.36.13
Board locking	2.36.14
Cable channel	2.36.14
Identification strip	
84 HP	2.36.14
Identification	
holder	2.36.14
Adapter brackets	2.36.15
Device handle	2.36.15
Universal handle	2.36.15
Subrack conversion	
kit	2.36.16
Subrack conversion kit	
6 U/84 HP	2.36.17
6 U/2 HP partial width	
front panel	2.36.17
Subdivide Mounting	
Height 6 U or 9 U	2.36.18
Notch	2.36.21
Shielding panel	2.36.22
Chassis plate	2.36.22
Cover plate	
84 HP	2.36.23
Covers on the rear	
side	2.36.24
Guide rails	2.36.26
Printed circuit board	
accessories	2.36.30
Slide nut	2.36.32



europac accessories

Case 2.10.0

Subrack 2.20.0

europacPRO 2.21.0

europacPRO

integral 2.22.0

europac 2.30.0

europac rational 2.31.0

europac lab 2.32.0

europac mobile 2.33.0

europac special 2.34.0

europac lab HF 2.35.0

europac

accessories 2.36.0

metripac 2.40.0

19" chassis 2.50.0

Modules 2.60.0

Accessories 2.70.0

Appendix 2.80.0

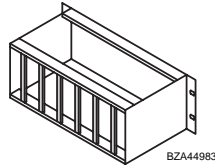
Selection of Horizontal Rails Rear

3 U

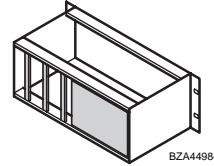
For connectors EN 60603 (DIN 41612)

Combination of separately assembled backplanes and connectors EN 60603 (DIN 41612)

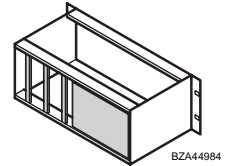
Combination of directly assembled backplanes and connectors EN 60603 (DIN 41612)



BZA44983

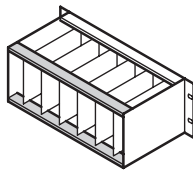


BZA44984

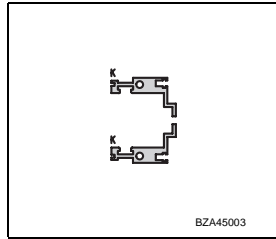


BZA44984

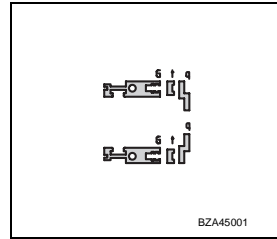
Printed circuit boards: 3 U



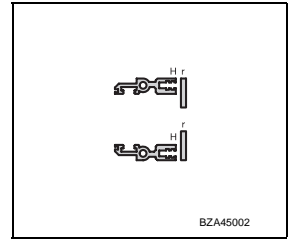
BZA44978



BZA45003



BZA45001



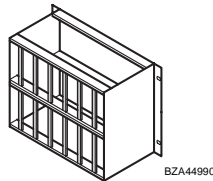
BZA45002

6 U

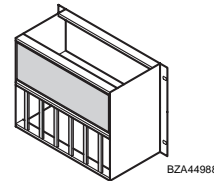
For connectors EN 60603 (DIN 41612)

Combination of separately assembled backplanes 3 U and connectors EN 60603 (DIN 41612)

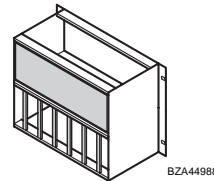
Combination of directly assembled backplanes 3 U and connectors EN 60603 (DIN 41612)



BZA44990

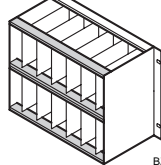


BZA44988

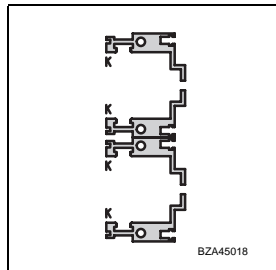


BZA44988

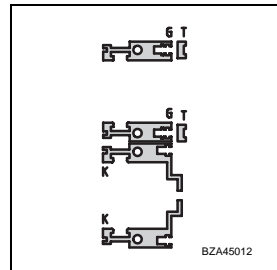
Printed circuit boards: 2 x 3 U



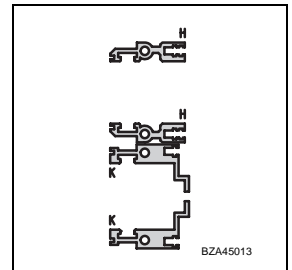
BZA44979



BZA45018

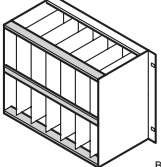


BZA45012

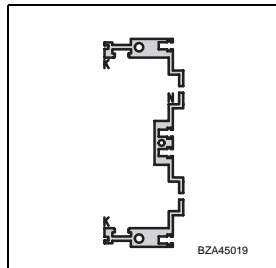


BZA45013

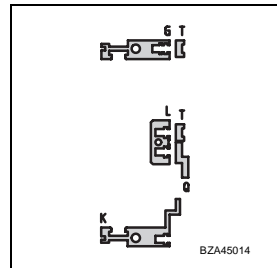
Printed circuit boards: 6 U



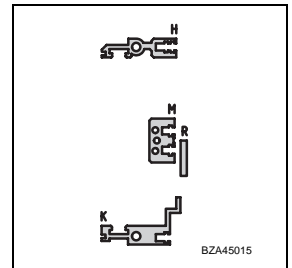
BZA44981



BZA45019

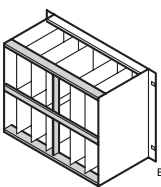


BZA45014

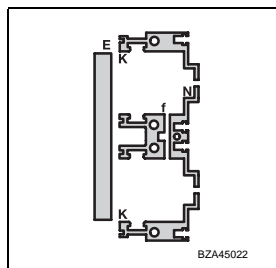


BZA45015

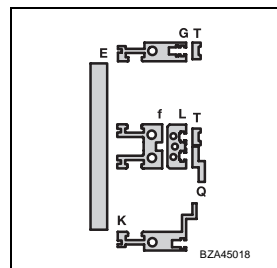
Printed circuit boards: 2 x 3 U + 1 x 6 U



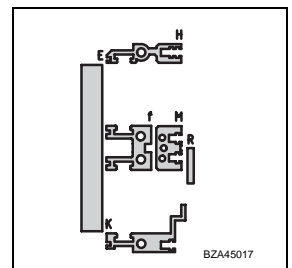
BZA44982



BZA45022



BZA45018

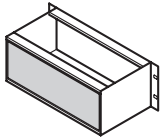


BZA45017



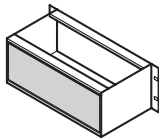
Selection of Central and Horizontal Rails Rear

For separately assembled backplane 3 U



BZA44985

For directly assembled backplane 3 U



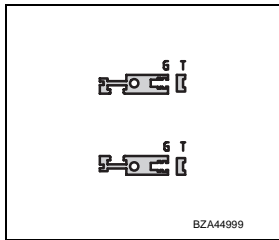
BZA44985

Colour = **Position**
 violet = top
 green = bottom
 red = centre
 orange = vertical support member

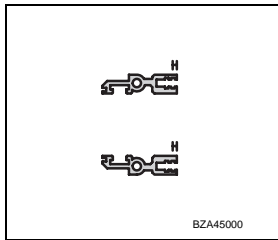
Letter = **Type of rail**

A-D	Horizontal rails front	2.36.4
E	Support member	2.36.18
F-K	Horizontal rails rear	2.36.6
L-N	Central rails rear	2.36.8
Q-S	Z and perforated rails rear	2.36.11
D	Insulation strip	2.36.12

There is a choice of several versions for some rails. For a mixed version, lower case letters stand for short rails (e. g. 40 HP).

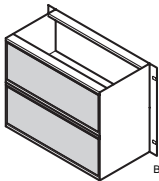


BZA44999



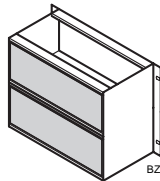
BZA45000

For 2 separately assembled backplanes 3 U



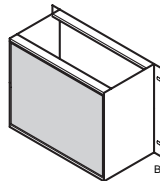
BZA44986

For 2 directly assembled backplanes 3 U



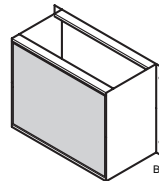
BZA44986

For 1 separately assembled backplane 6 U

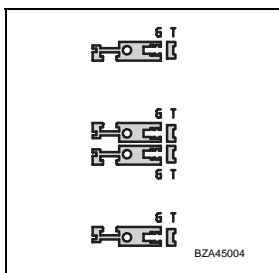


BZA44987

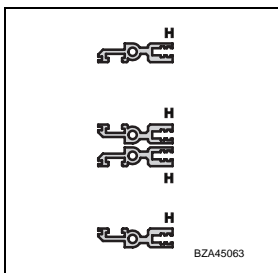
For 1 directly assembled backplane 6 U



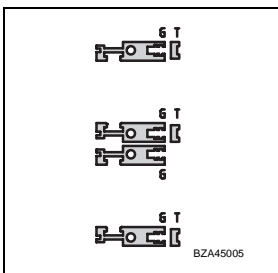
BZA44987



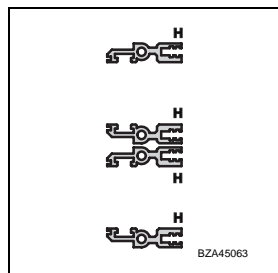
BZA45004



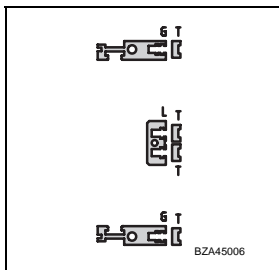
BZA45063



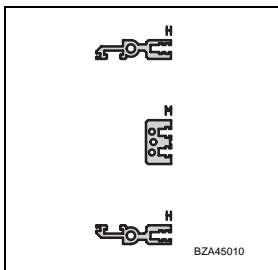
BZA45005



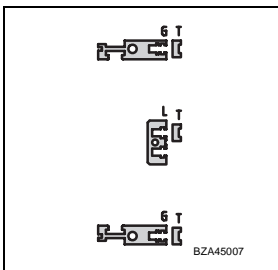
BZA45063



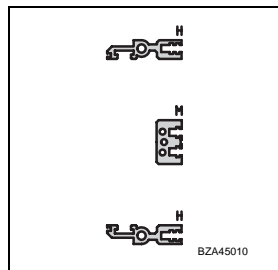
BZA45006



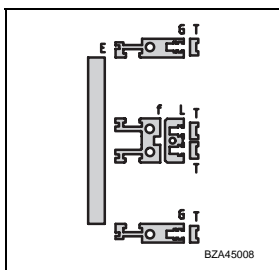
BZA45010



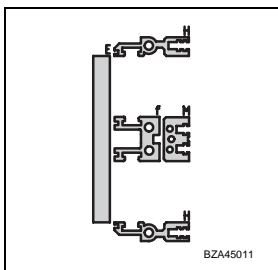
BZA45007



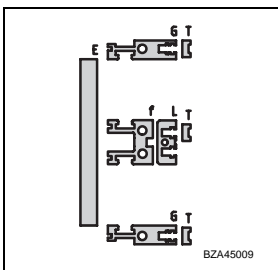
BZA45010



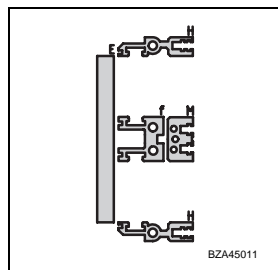
BZA45008



BZA45011

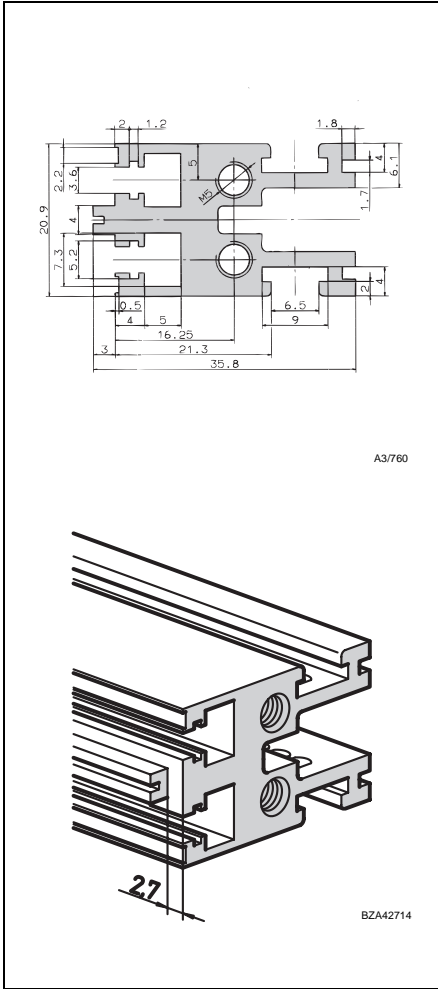


BZA45009



BZA45011

Horizontal Rails Information	2.36.0
Horizontal Rails Front	2.36.4
Horizontal rail for HL handle	2.36.6
Horizontal Rails Rear/Central	2.36.6
Z and perforated rails	2.36.11
T – Insulation Strip	2.36.12
Threaded inserts	2.36.13
Board locking	2.36.14
Cable channel	2.36.14
Identification strip 84 HP	2.36.14
Identification holder	2.36.14
Adapter brackets	2.36.15
Device handle	2.36.15
Universal handle	2.36.15
Subrack conversion kit	2.36.16
Subrack conversion kit 6 U/84 HP	2.36.17
6 U/2 HP partial width front panel	2.36.17
Subdivide Mounting Height 6 U or 9 U	2.36.18
Notch	2.36.21
Shielding panel	2.36.22
Chassis plate	2.36.22
Cover plate 84 HP	2.36.23
Covers on the rear side	2.36.24
Guide rails	2.36.26
Printed circuit board accessories	2.36.30
Slide nut	2.36.32



C - Double horizontal rail

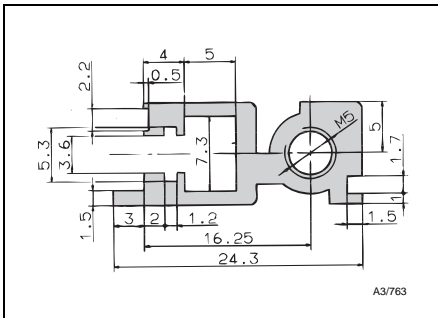
- Standard version, with top cover

Usable HP	Length (mm)	Order No. (1 piece)	
		anodised	clear chromated
20	106,68	30825-011	30825-825
21	111,76	30825-012	30825-826
40	208,28	30825-032	30825-845
42	218,44	30825-034	30825-847
60	309,88	30825-052	30825-865
63	325,12	30825-055	30825-868
84	431,80	30825-076	30825-889
1 metre		30825-080	30825-755

D - Double horizontal rail, with notch

- With lip
- Only for europac lab HF and lab special subracks as well as cardpac, compac, ratiopac and propac cases
- With notches on both sides

Usable HP	Length (mm)	Order No. (1 piece)	
		anodised	clear chromated
42	218,44	30825-637	30825-708
63	352,12	30825-658	30825-729
84	431,80	30825-679	30825-750

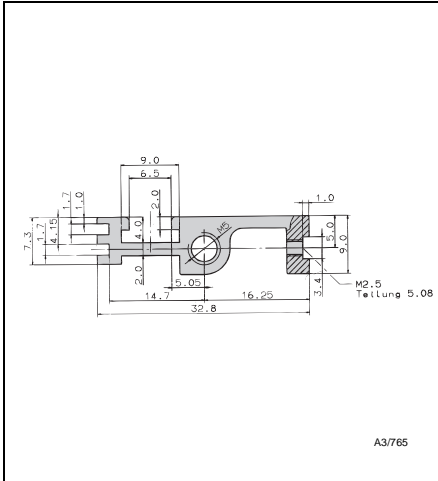


Horizontal rail front

- With lip, lightweight version
- Application as for horizontal rail type A, if guide rails have not been mounted

Usable HP	Length (mm)	Order No. (1 piece)
		anodised
84	431,80	30820-285
1 metre		30820-296

- Horizontal Rails Information2.36.0
- Horizontal Rails Front2.36.4
- Horizontal rail for HL handle2.36.6
- Horizontal Rails Rear/Central.....2.36.6
- Z and perforated rails2.36.11
- T - Insulation Strip2.36.12
- Threaded inserts. 2.36.13
- Board locking.....2.36.14
- Cable channel2.36.14
- Identification strip 84 HP2.36.14
- Identification holder2.36.14
- Adapter brackets 2.36.15
- Device handle2.36.15
- Universal handle .2.36.15
- Subrack conversion kit.....2.36.16
- Subrack conversion kit 6 U/84 HP2.36.17
- 6 U/2 HP partial width front panel2.36.17
- Subdivide Mounting Height 6 U or 9 U .2.36.18
- Notch.....2.36.21
- Shielding panel ...2.36.22
- Chassis plate2.36.22
- Cover plate 84 HP2.36.23
- Covers on the rear side2.36.24
- Guide rails.....2.36.26
- Printed circuit board accessories2.36.30
- Slide nut.....2.36.32

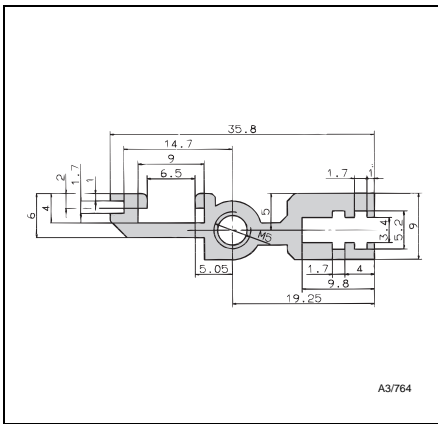


A3/765

G - Horizontal rail with integrated M-2.5 threads

- For separate assembly of backplanes
- Lightweight version
- Saves having to use threaded inserts

Usable HP	Length (mm)	Order No. (1 unit) clear chromated
20	106,68	30838-346
21	111,76	30838-347
42	218,44	30838-368
63	325,12	30838-389
84	431,80	30838-410

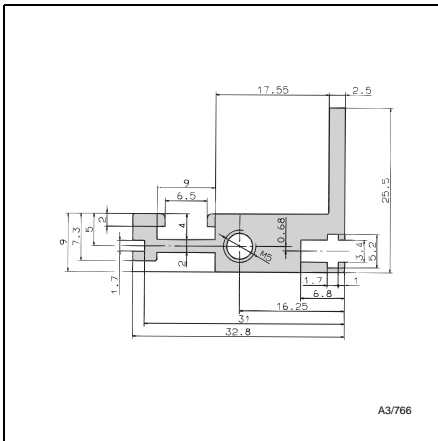


A3/764

H - Horizontal rail with + 3 mm

- For direct mounting of backplanes
- Lightweight version

Usable HP	Length (mm)	Order No. (1 piece)	
		anodised	clear chromated
42	218,44	30818-780	30837-927
63	325,12	30818-801	30837-928
84	431,80	30818-822	30837-929



A3/766

I - Horizontal rail with flange

- With integrated mounting for 31-pin connectors according to DIN 41617

Usable HP	Length (mm)	Order No. (1 piece) anodised
42	218,44	30819-363
60	309,88	30819-381
84	431,80	30819-405

- Horizontal Rails Information2.36.0
- Horizontal Rails Front2.36.4
- Horizontal rail for HL handle2.36.6
- Horizontal Rails Rear/Central.....2.36.6
- Z and perforated rails2.36.11
- T - Insulation Strip2.36.12
- Threaded inserts .2.36.13
- Board locking.....2.36.14
- Cable channel2.36.14
- Identification strip 84 HP2.36.14
- Identification holder2.36.14
- Adapter brackets .2.36.15
- Device handle2.36.15
- Universal handle .2.36.15
- Subrack conversion kit.....2.36.16
- Subrack conversion kit 6 U/84 HP2.36.17
- 6 U/2 HP partial width front panel2.36.17
- Subdivide Mounting Height 6 U or 9 U .2.36.18
- Notch.....2.36.21
- Shielding panel ...2.36.22
- Chassis plate2.36.22
- Cover plate 84 HP2.36.23
- Covers on the rear side2.36.24
- Guide rails.....2.36.26
- Printed circuit board accessories2.36.30
- Slide nut.....2.36.32



europac accessories

Case 2.10.0

Subrack 2.20.0

europacPRO 2.21.0

europacPRO integral 2.22.0

europac 2.30.0

europac rational 2.31.0

europac lab 2.32.0

europac mobile 2.33.0

europac special 2.34.0

europac lab HF 2.35.0

europac accessories 2.36.0

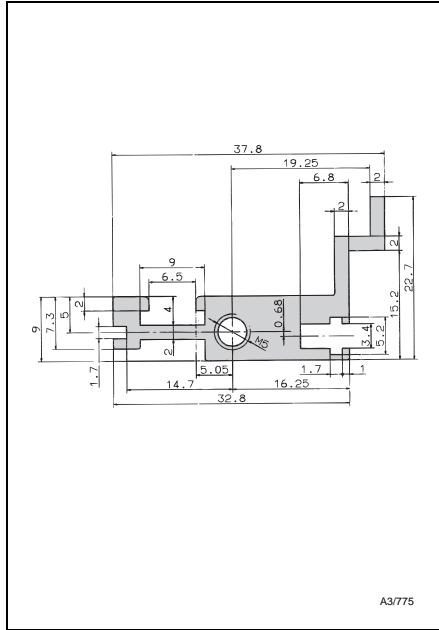
metripac 2.40.0

19" chassis 2.50.0

Modules 2.60.0

Accessories 2.70.0

Appendix 2.80.0

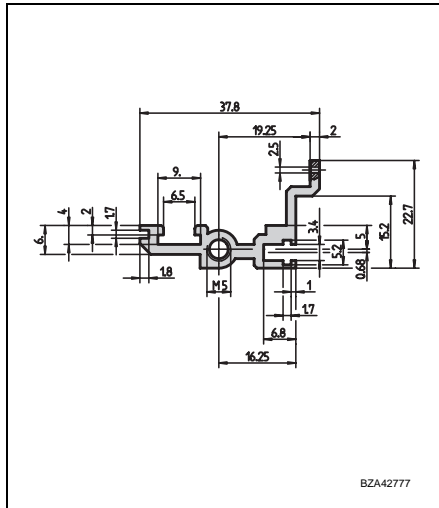


K - Horizontal rail with Z, standard

- With integrated mounting for connectors according to EN 60603 (DIN 41612)
- Standard version

Version 84 HP is printed with HP details

Usable HP	Length (mm)	Order No. (1 piece)	
		anodised	clear chromated
20	106,68	30819-024	30837-627
21	111,76	30819-025	30837-628
28	147,32	30819-032	-
40	208,28	30819-044	30837-647
42	218,44	30819-046	30837-649
60	309,88	30819-064	30837-667
63	325,12	30819-067	30837-670
84	431,80	30819-088	30837-691
1 metre		30819-334	30837-697



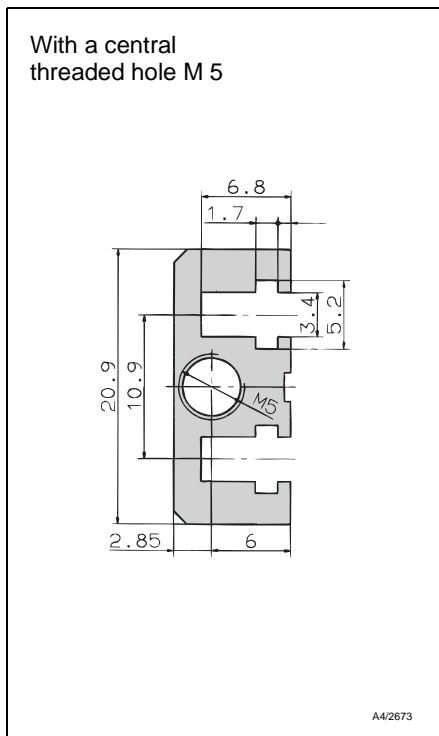
K - Horizontal rail with Z, lightweight

- With integrated mounting for connectors according to EN 60603 (DIN 41612)
- Lightweight version

Version 84 HP is printed with HP details

Usable HP	Length (mm)	Order No. (1 piece)	
		anodised	clear chromated
28	147,32	30819-469	30837-077
42	218,44	30819-483	30837-091
63	325,12	30819-504	30837-112
84	431,80	30819-525	30837-133
1 metre		-	30837-134

With a central threaded hole M 5



L - Horizontal Rail, centre

- For separate assembly of backplanes

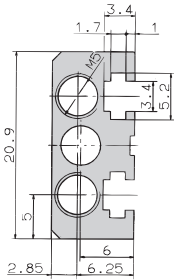
Version 1, anodised finish

- for subracks
- europac rational
 - europac mobile
 - europac special

Usable HP	Length (mm)	Order No. (1 piece)
20	106,68	30817-518
21	111,76	30817-519
40	208,28	30817-181
42	218,44	30817-076
60	309,88	30817-554
63	325,12	30817-556
84	431,80	30817-074
1 metre		30817-087

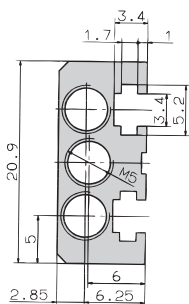


With two threaded holes M 5



AA/2675

With three threaded holes M 5



AA/2674

Version 2, anodised finish

for all cases
for subracks
– europac lab
– europac lab HF

Usable HP	Length (mm)	Order No. (1 piece)
84	431,80	30825-356

Version 3, clear chromated finish

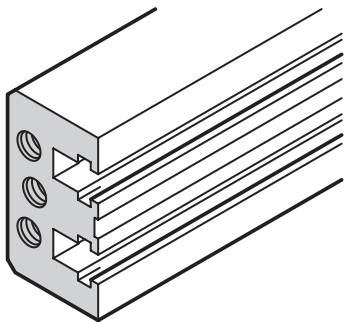
for all cases
for subracks

Usable HP	Length (mm)	Order No. (1 piece)
20	106,68	30837-136
21	111,76	30837-137
40	208,28	30837-156
42	218,44	30837-158
60	309,88	30837-176
63	325,12	30837-179
84	431,80	30837-200
1 metre		30837-201

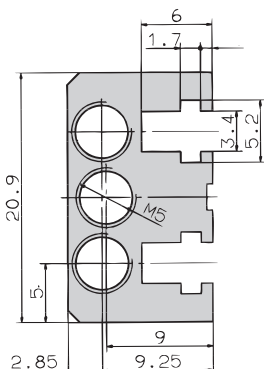
M - Horizontal rail centre, with + 3 mm

■ For direct mounting of backplanes
for all cases
for subracks

Usable HP	Length (mm)	Order No. (1 piece)	
		anodised	clear chromated
84	431,80	30818-958	30837-915



BZA45064



AA/2676

- Horizontal Rails Information2.36.0
- Horizontal Rails Front2.36.4
- Horizontal rail for HL handle2.36.6
- Horizontal Rails Rear/Central.....2.36.6
- Z and perforated rails2.36.11
- T – Insulation Strip2.36.12
- Threaded inserts. 2.36.13
- Board locking.....2.36.14
- Cable channel2.36.14
- Identification strip 84 HP2.36.14
- Identification holder2.36.14
- Adapter brackets 2.36.15
- Device handle2.36.15
- Universal handle .2.36.15
- Subrack conversion kit.....2.36.16
- Subrack conversion kit 6 U/84 HP2.36.17
- 6 U/2 HP partial width front panel2.36.17
- Subdivide Mounting Height 6 U or 9 U.2.36.18
- Notch.....2.36.21
- Shielding panel ...2.36.22
- Chassis plate2.36.22
- Cover plate 84 HP2.36.23
- Covers on the rear side2.36.24
- Guide rails.....2.36.26
- Printed circuit board accessories2.36.30
- Slide nut.....2.36.32



Case 2.10.0

Subrack 2.20.0

europacPRO 2.21.0

europacPRO

integral 2.22.0

europac 2.30.0

europac rational 2.31.0

europac lab 2.32.0

europac mobile 2.33.0

europac special 2.34.0

europac lab HF 2.35.0

europac

accessories 2.36.0

metripac 2.40.0

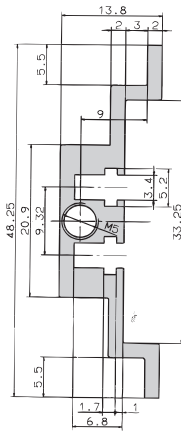
19" chassis 2.50.0

Modules 2.60.0

Accessories 2.70.0

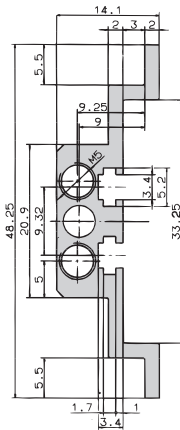
Appendix 2.80.0

With a central threaded hole M 5



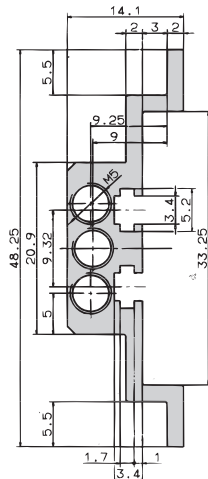
A3/768

With two central threaded holes M 5



A3/770

With three central threaded holes M 5



A3/769

N - Horizontal rail, with Z

- With integrated mounting for connectors according to EN 60603 (DIN 41612)

Version 1, anodised finish

- for subracks
- europac rational
 - europac mobile
 - europac special

Usable HP	Length (mm)	Order No. (1 piece)
20	106,68	30819-247
21	111,76	30819-248
40	208,28	30819-267
42	218,44	30819-269
60	309,88	30819-288
63	325,12	30819-291
84	431,80	30819-312
1 metre		30817-091

Version 2, anodised finish

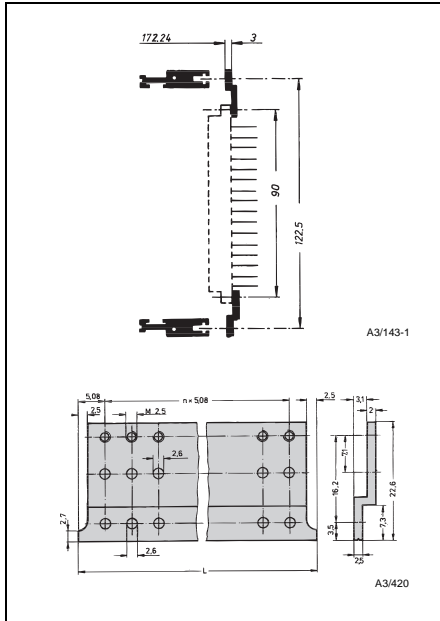
- for all cases
for subracks
- europac lab
 - europac lab HF

Usable HP	Length (mm)	Order No. (1 piece)
84	431,80	30825-216

Version 3, clear chromated finish

- for all cases
for subracks

Usable HP	Length (mm)	Order No. (1 piece)
21	111,76	30837-204
40	208,28	30837-223
42	218,44	30837-225
63	325,12	30837-246
84	431,80	30837-267
1 metre		30837-268



Z and perforated rails

For mounting of connectors complying with

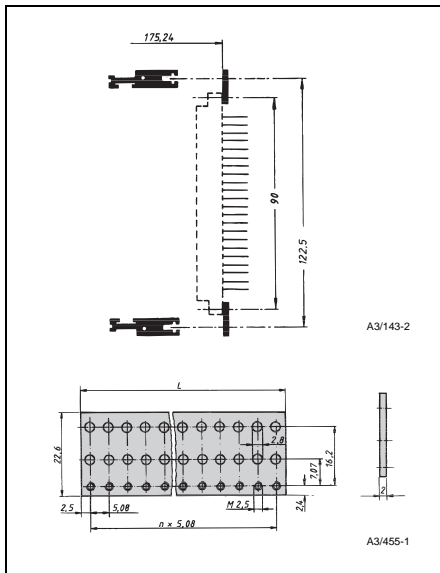
- EN 60603 (DIN 41612)
- DIN 41617

Q - Z-rails for connectors according to EN 60603 (DIN 41612)

Usable HP	Length (mm)	Order no.
40	203,2	30822-045
60	304,8	30822-065
80	426,7	30822-089

Delivery comprises

Qty	Description	Material	Surface
1	Z-rails	Al	anodised



R - Perforated rails for connectors according to EN 60603 (DIN 41612)

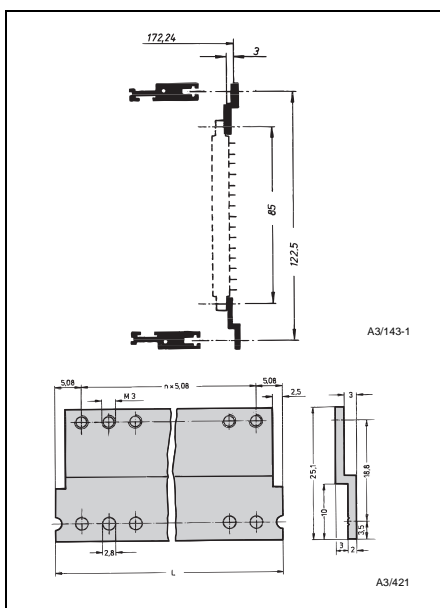
Usable HP	Length (mm)	Order no.
30	152,4	30822-201
40	203,2	30822-202
60	304,8	30822-204
84	426,7	30822-206

Delivery comprises

Qty	Description	Material	Surface
1	Perforated rail	Al	clear chromated

Note

Standardised space only together with (rear) horizontal rail with recessed mounting plane



S - Z-rails for connectors according to DIN 41617

Usable HP	Length (mm)	Order no.
40	203,2	30819-763
60	304,8	30819-783
84	426,7	30819-808

Delivery comprises

Qty	Description	Material	Surface
1	Z-rails	Al	anodised

- Horizontal Rails Information2.36.0
- Horizontal Rails Front2.36.4
- Horizontal rail for HL handle2.36.6
- Horizontal Rails Rear/Central.....2.36.6
- Z and perforated rails2.36.11
- T - Insulation Strip2.36.12
- Threaded inserts. 2.36.13
- Board locking.....2.36.14
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- Identification strip 84 HP2.36.14
- Identification holder2.36.14
- Adapter brackets 2.36.15
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- Subrack conversion kit.....2.36.16
- Subrack conversion kit 6 U/84 HP2.36.17
- 6 U/2 HP partial width front panel2.36.17
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- Notch.....2.36.21
- Shielding panel ...2.36.22
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- Cover plate 84 HP2.36.23
- Covers on the rear side2.36.24
- Guide rails.....2.36.26
- Printed circuit board accessories2.36.30
- Slide nut.....2.36.32



europac accessories

Case 2.10.0

Subrack 2.20.0

europacPRO 2.21.0

europacPRO

integral 2.22.0

europac 2.30.0

europac rational 2.31.0

europac lab 2.32.0

europac mobile 2.33.0

europac special 2.34.0

europac lab HF 2.35.0

europac

accessories 2.36.0

metripac 2.40.0

19" chassis 2.50.0

Modules 2.60.0

Accessories 2.70.0

Appendix 2.80.0

Assembly kit for Z- and perforated rails

■ Mounting is by means of threaded inserts or slide nuts

Item	Description	Comment	Order no.
1	Square nut with slide M 2.5; SW 5 DIN 562		21100-425 100 pieces
2	Threaded strip M 2.5; 84 HP		30819-594 1 piece
3	Pan head screw with slot M 2.5 × 6 DIN 85	for "central rail" with Z	21100-146 100 pieces
	M 2.5 × 5 DIN 85	for "horizontal rail with Z- or perforated rail for connectors as per DIN 41612,41617	21100-624 100 pieces

T - Insulation Strip

■ For insulated mounting of backplanes or mounting metal plates as holders for connectors

■ Setting up standardised mounting depth for plug-in units in the subrack

Usable HP	Length (mm)	Order no.
20	101,5	30835-109
28	144,2	30835-110
42	210,2	60817-118
84	428,6	60817-061

Delivery comprises

Item	Qty	Description	Material	Colour
1	1	Insulation strip	PBTPUL 94 V-0	grey

Clips

Clips for fixing the insulation strip (item 1) to the threaded insert (item 3).

Order no. **21100-824**

Delivery comprises

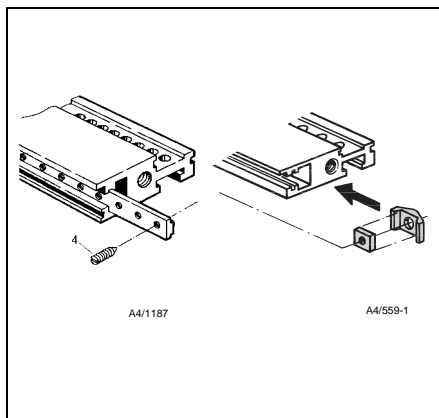
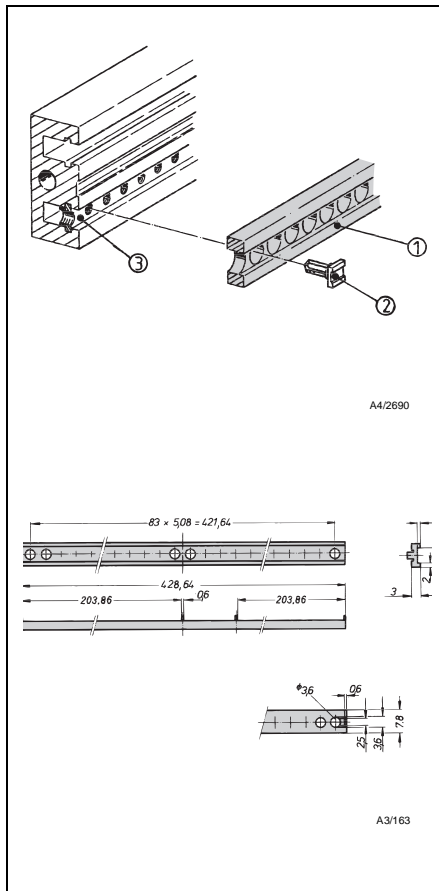
Item	Qty	Description	Material	Colour
2	1 Kit (100 pieces)	Clips	PPO UL 94 V-0	red

Grub screw

■ For fixing the threaded insert

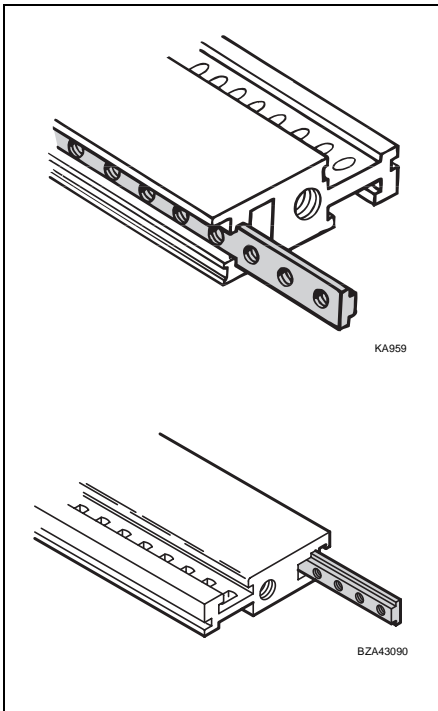
■ Required for conductive connections in the case of anodised horizontal rails

Description	Thread	Order no.	
		1 kit (20 units)	1 kit (100 pieces)
Grub screw DIN 553	M 2.5	21100-275	21100-276
	M 3	-	21100-646





Threaded inserts



Threaded insert, standard, M 2.5

Can be used for all horizontal rails.

Usable HP	Length (mm)	Order no.
9	50,3	30819-669
20	106,2	30819-658
28	146,8	30819-650
40	207,8	30819-638
42	217,9	30819-636
60	309,4	30819-618
63	324,6	30819-615
84	431,3	30819-594

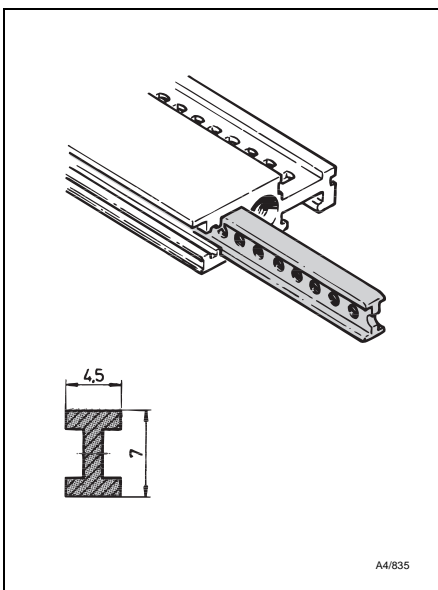
Delivery comprises

Qty	Description	Material	Surface
1	Threaded strip	Steel extrusion	zinc-plated

Note

The collar screws for mounting partial width front panels must be 11.0 mm long.

Thread spacing: 1 HP (5.08 mm).



Threaded insert, double T, M 2.5

Can be used for front horizontal rails.

Extended mounting possibility for other assemblies.

Usable HP	Length (mm)	Order no.
28	146,8	30829-035
42	217,9	30829-049
63	324,6	30829-070
84	431,3	30829-091

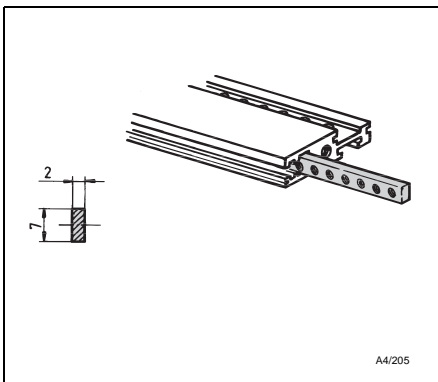
Delivery comprises

Qty	Description	Material	Surface
1	Threaded strip	Steel section	zinc-plated

Note

The collar screws for mounting partial width front panels must be 12.3 mm long.

Thread spacing: 1 HP (5.08 mm).



Threaded insert, M 3

Can only be used for front horizontal rails.

M 3 conforms to the 19" standard

Usable HP	Length (mm)	Order no.
84	431,3	30821-589

Delivery comprises

Qty	Description	Material	Surface
1	Threaded strip	Steel extrusion	zinc-plated

Thread spacing: 1 HP (5.08 mm).

- Horizontal Rails Information2.36.0
- Horizontal Rails Front2.36.4
- Horizontal rail for HL handle2.36.6
- Horizontal Rails Rear/Central.....2.36.6
- Z and perforated rails2.36.11
- T – Insulation Strip2.36.12
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- Board locking.....2.36.14
- Cable channel2.36.14
- Identification strip 84 HP2.36.14
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- Subrack conversion kit 6 U/84 HP2.36.17
- 6 U/2 HP partial width front panel2.36.17
- Subdivide Mounting Height 6 U or 9 U .2.36.18
- Notch.....2.36.21
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- Chassis plate2.36.22
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- Covers on the rear side2.36.24
- Guide rails.....2.36.26
- Printed circuit board accessories2.36.30
- Slide nut.....2.36.32



europac accessories

Case 2.10.0

Subrack 2.20.0

europacPRO 2.21.0

europacPRO

integral 2.22.0

europac 2.30.0

europac rational 2.31.0

europac lab 2.32.0

europac mobile 2.33.0

europac special 2.34.0

europac lab HF 2.35.0

europac

accessories 2.36.0

metripac 2.40.0

19" chassis 2.50.0

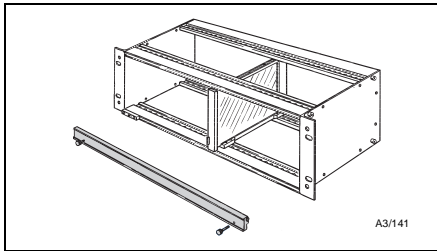
Modules 2.60.0

Accessories 2.70.0

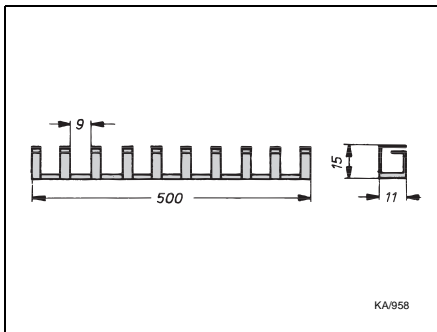
Appendix 2.80.0



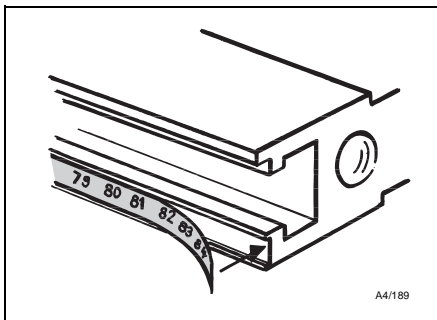
04492017



A3/141



KA/958



A4/189



04492018

Board locking

- For europac subracks 84 HP.
- The aluminium extrusion retaining rail locks the printed boards as well as carrying identification marking.

Delivery comprises

Aluminium rail, anodised, with ID label, transparent cover strip, 2 knurled screws and 2 slide nuts.

Order no. **20817-182**

Cable ducting

Order no. **69000-507**

Delivery comprises

Item	Qty	Description	Material	Colour
1	1	Cable	PP UL 94 V-2	grey-white

Can be mounted on threaded inserts or slide nuts.

Identification strip 84 HP

- For identification of slots and mounting positions
- self-adhesive

Number grid	Lettering	Order no.1 Kit (18 piece)
1 HP	for front (1,2,3 ... 84)	60807-076
	for rear (84, 83, 82 ... 1)	60807-077
4 HP	for front (1,2,3 ... 21)	60819-007

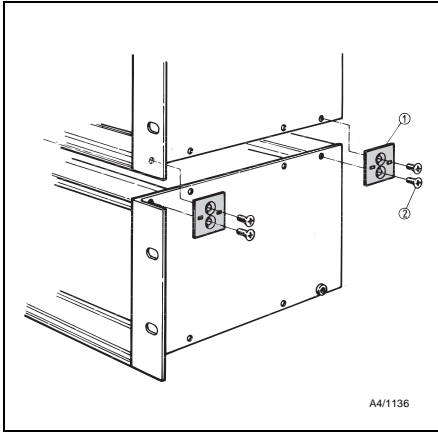
Identification holder

The acrylic glass identification holder can be snapped into place in the front horizontal rail without using tools. The rail shape facilitates pushing in a label strips.

Note

The identification holder precludes attaching front panels.

Qty	Description	Material/finish	Length (mm)	Order no.
1	Identification holder	Acrylic glass, PMMA/transparent	426	60807-028
1	Label strips	Thin card stock/white	1000	60807-026
20 pieces	Label strips	Thin card stock/white	426	69000-934



A4/1136

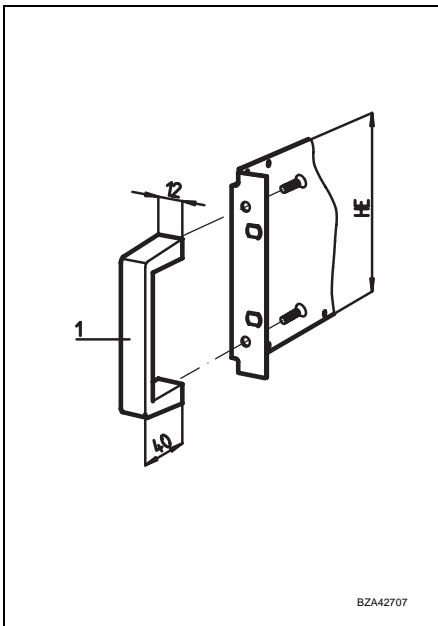
Adapter brackets

- For assembling subracks above one another
- Assembly is carried out by exchanging the horizontal rail fixing screws for the screws supplied.

Order no. **20822-045**

Delivery comprises

Item	Qty	Description	Material	Surface
1	4	Clips	Diecast aluminium	
2	8	Screw, countersunk	steel	zinc-plated

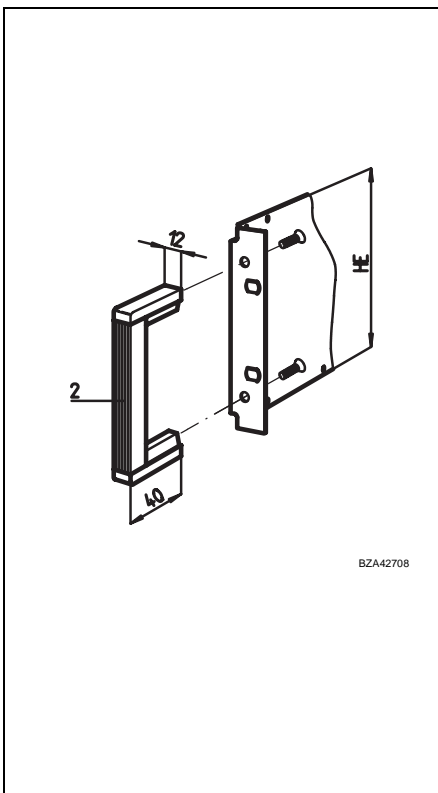


BZA42707

Device handle

- For all subracks
- Made from aluminium profile
- Load-carrying capacity: 30 kg per handle

Description	U	Finish, anodised	Order no. for 1 unit
Handle	3	clear	10501-005
		black	10501-026
	4	clear	10501-018
		black	10501-028
	6	clear	10501-008
		black	10501-029
Countersunk screw M 5 × 12			21100-234 100 pieces



BZA42708

Universal handle

- For all subracks
- In three parts; 2 end pieces made from fibreglass reinforced polyamide, intermediate plate made from aluminium profile
- Load-carrying capacity: 10 kg per handle

Description	U	Order no. for 1 unit
Universal handle	3	10502-057
	5	10502-063
	6	10502-065
Countersunk screw M 5 / 12		21100-234 100 pieces

Delivery comprises

Qty	Description	Material	Surface
2	End piece	PA, UL 94 HB	Dark grey
1	Intermediate bar	Aluminium extrusion	anodised, clear

- Horizontal Rails Information2.36.0
- Horizontal Rails Front2.36.4
- Horizontal rail for HL handle2.36.6
- Horizontal Rails Rear/Central.....2.36.6
- Z and perforated rails2.36.11
- T – Insulation Strip2.36.12
- Threaded inserts. 2.36.13
- Board locking.....2.36.14
- Cable channel2.36.14
- Identification strip 84 HP2.36.14
- Identification holder2.36.14
- Adapter brackets 2.36.15
- Device handle2.36.15
- Universal handle .2.36.15
- Subrack conversion kit.....2.36.16
- Subrack conversion kit 6 U/84 HP2.36.17
- 6 U/2 HP partial width front panel2.36.17
- Subdivide Mounting Height 6 U or 9 U .2.36.18
- Notch.....2.36.21
- Shielding panel ...2.36.22
- Chassis plate2.36.22
- Cover plate 84 HP2.36.23
- Covers on the rear side2.36.24
- Guide rails.....2.36.26
- Printed circuit board accessories2.36.30
- Slide nut.....2.36.32



europac accessories

Case 2.10.0

Subrack 2.20.0

europacPRO 2.21.0

europacPRO

integral 2.22.0

europac 2.30.0

europac rational 2.31.0

europac lab 2.32.0

europac mobile 2.33.0

europac special 2.34.0

europac lab HF 2.35.0

europac

accessories 2.36.0

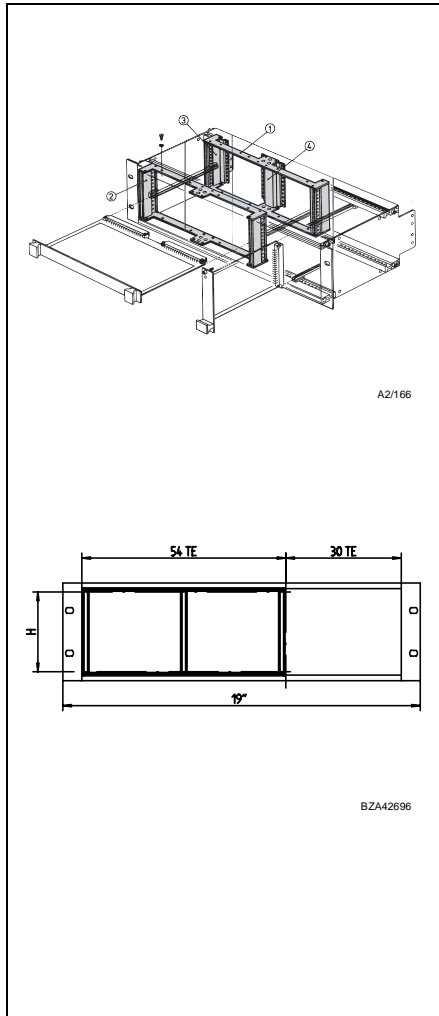
metripac 2.40.0

19" chassis 2.50.0

Modules 2.60.0

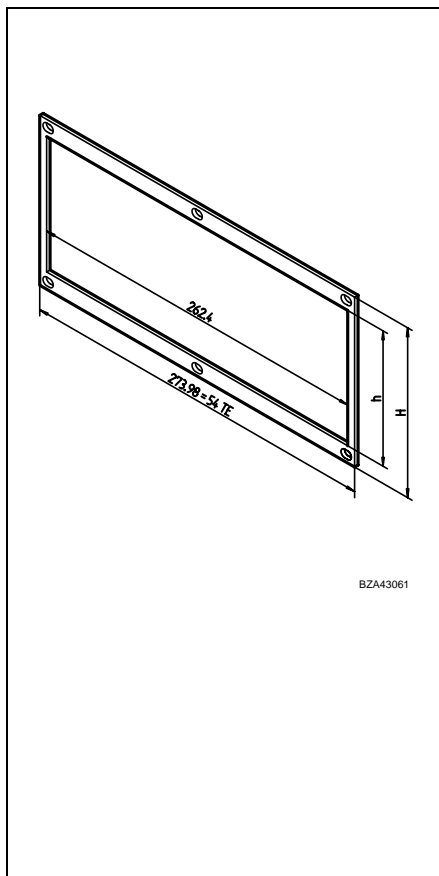
Accessories 2.70.0

Appendix 2.80.0



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BZA42696



BZA43061

Subrack conversion kit

For mixed card installation, i. e. horizontal installation of single or double-height euroboard in a subrack/case with 3 U or 4 U height and at least 53 HP (269.24 mm) mounting width.

Note

Space requirement 53 HP. No horizontal rails may be used with Z at the rear of a subrack/case.

Description	Usable width	Order No. (1 piece)	
		Surface anodised	clear chromated
Subrack conversion kit for 3 U	20 HP	20819-091	*
-Rear horizontal rail with Z		20819-090	20837-003
-Rear horizontal rail without Z			
Subrack conversion kit for 4 U	28 HP	20819-097	*
-Rear horizontal rail without Z			

* Available on request

Delivery comprises

Item	Qty	Description	Material	Surface
1	4	Mounting plates	Zinc die-cast	
2	2	Front horizontal rails, without lip	Aluminium extrusion	See table
3	2	Rear horizontal rails, with/without Z	Aluminium extrusion	See table
4	1	Centre horizontal rail, with/without Z	Aluminium extrusion	See table
5	1 Set	Mounting parts		

Delivery: In kit form

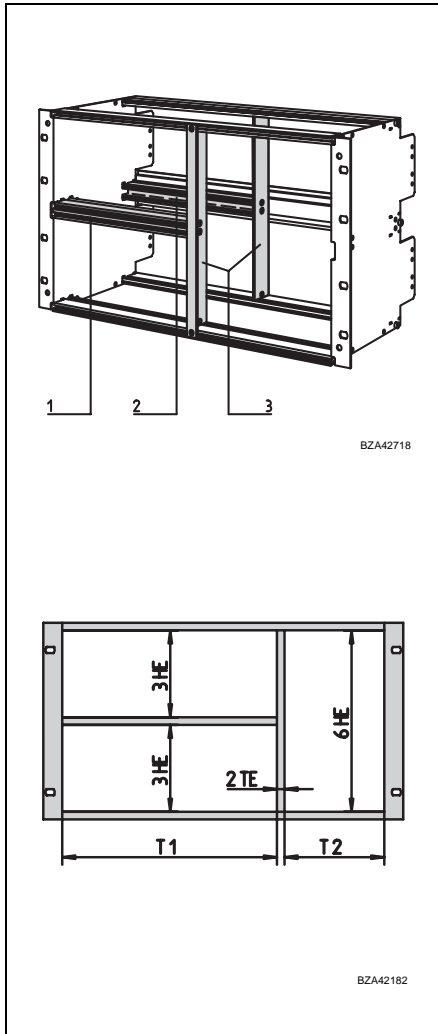
Front frame for subrack conversion kit

The front frame locks the partial width front panels flush with the plug-in units that are installed in the mounting kit.

For subrack conversion kit	Dimensions in mm		Order no.
	H	H	
3 U	128,4	102,0	30835-162
4 U	168,8	142,6	30838-949

Delivery comprises

Item	Qty	Description	Material	Surface	Comments
1	1	Front frame	Al 2.5 mm	clear anodised	Partial width front panel with cut-out



Subrack conversion kit 6 U/84 HP

- Type A for all europac subracks except for europac lab special and europac lab HF
- Type B with notch for subracks europac lab special and europac lab HF
- Subdivision of the mounting height into
 - 2 × 3 U areas and
 - 1 × 6 U areas
- For single-height euroboard 100 mm high and double-height euroboard 233.4 mm high
- Suitable partial width front panel 6 U/2 HP for covering the splitting extrusion

Pitch T1 : T2 in HP	Order no.	
	anodised 6 U/84 HP	clear chromated 6 U/84 HP
20 : 62	20819-085	20819-110
21 : 61	20819-049	*
40 : 42	20819-086	20819-112
42 : 40	20819-050	20819-113
60 : 22	20819-045	20819-114
63 : 19	20819-051	*

* Available on request

Delivery comprises

Item	Qty	Description	Material	Surface
1	1	Double rail front, centre	Aluminium extrusion	See table
2	1	Double rail rear, centre	Aluminium extrusion	anodised
3	2	Support members	Diecast aluminium	
4	1 Set	Mounting parts		

Delivery: In kit form

6 U/2 HP partial width front panel

- For covering the support member
- Material: Al 2.5 mm

Surface	Order No. (1 piece) (with notch)
anodised, clear	30817-034
anodised, clear, cut edge, clean	30818-701

See also partial width front panel 6 U/2 HP for europac lab HF

Assembly part kit for partial width front panels 6 U/2 HP

Description	Finish/material	Order no. 100 pieces
Collar screw with slot M 2.5 × 11	nickel-plated	21100-379
	black	21100-590
Pozidrive collar screw M 2.5 × 11	nickel-plated	21100-748
	black	21100-749
Washer 2.7	PA-6	21101-121

Note: Please order threaded inserts separately

- Horizontal Rails Information2.36.0
- Horizontal Rails Front2.36.4
- Horizontal rail for HL handle2.36.6
- Horizontal Rails Rear/Central.....2.36.6
- Z and perforated rails2.36.11
- T – Insulation Strip2.36.12
- Threaded inserts .2.36.13
- Board locking.....2.36.14
- Cable channel2.36.14
- Identification strip 84 HP2.36.14
- Identification holder2.36.14
- Adapter brackets .2.36.15
- Device handle2.36.15
- Universal handle .2.36.15
- Subrack conversion kit.....2.36.16
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- 6 U/2 HP partial width front panel2.36.17
- Subdivide Mounting Height 6 U or 9 U .2.36.18
- Notch.....2.36.21
- Shielding panel ...2.36.22
- Chassis plate2.36.22
- Cover plate 84 HP2.36.23
- Covers on the rear side2.36.24
- Guide rails.....2.36.26
- Printed circuit board accessories2.36.30
- Slide nut.....2.36.32



europac accessories

Case 2.10.0

Subrack 2.20.0

europacPRO 2.21.0

europacPRO

integral 2.22.0

europac 2.30.0

europac rational 2.31.0

europac lab 2.32.0

europac mobile 2.33.0

europac special 2.34.0

europac lab HF 2.35.0

europac accessories 2.36.0

metripac 2.40.0

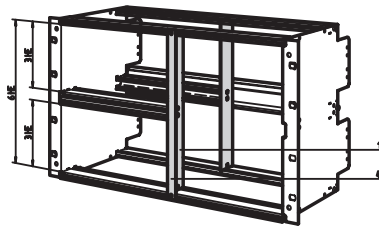
19" chassis 2.50.0

Modules 2.60.0

Accessories 2.70.0

Appendix 2.80.0

Example: Mounting height 6 U subdivided



BZA42774

Subdivide Mounting Height 6 U or 9 U

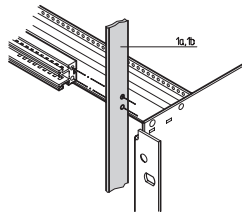
The mounting height of subracks and system cases can be subdivided into several mounting areas. To achieve this, two support members (1) are incorporated as a "divider plate".

Assembly points in the 3-U-increment allow installation of shortened horizontal rails. A 2 HP wide partial width front panel (4) covers the support member.

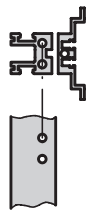
Select the front support member

All support member versions (1a, 1b, 1c) may be used.

Rear installation conditions (support member)

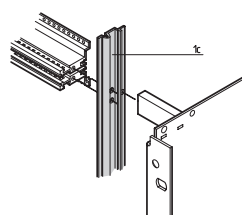


BZA45048



BZA42783

Rear installation conditions (support member depth)



BZA45061



BZA42782

Select the rear support member

Two different types of support members may be mounted at the rear.

■ Standard support member

– with cut-out for horizontal rail mounting (1a, 1b)

For assembly of shortened rear horizontal rails.

Central rails can not be bolted onto the support member. When "rear double rails" are used the central rails can be routed behind the support member.

■ Support member, depth

– with cut-out for fixing horizontal and central rails (1c)

For assembly of shortened rear horizontal rails as well as central rails.

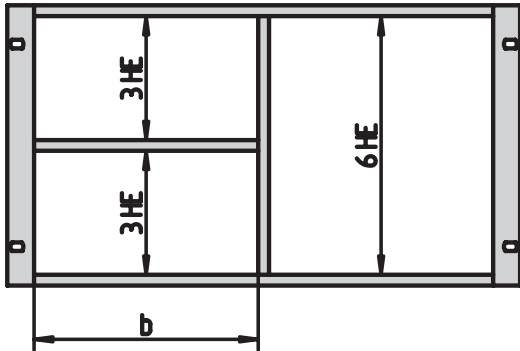
Central rails cannot be routed behind this support member.



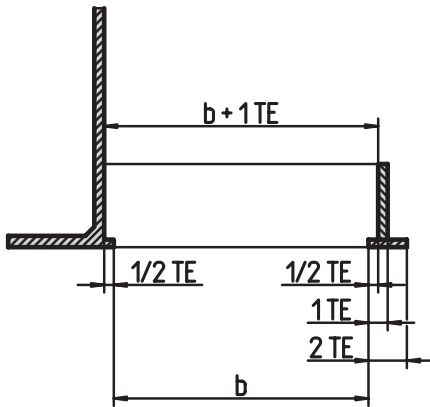
Individual parts 6 U

Shortened horizontal, double horizontal and central rails ("rails" length = required mounting width $w + 1$ HP) see overview
Please order threaded inserts separately

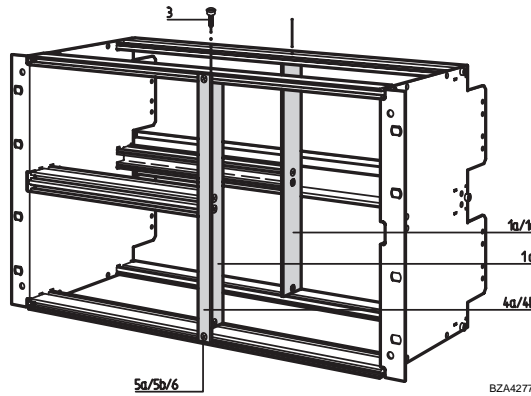
Mounting height 6 U combined



BZA42772



BZA42776



BZA42773

Item	Qty	Description	Material/finish	Comments	Order no.
1a	1	Standard support member 6 U	Diecast aluminium	2 support members necessary per subrack	60819-006
1c	1	Support member, depth	Aluminium extrusion, clear chromated		30819-321
2a	100	Pozidrive countersunk screw M 5 × 12	St, zinc-plated	for horizontal rails to support member (item 1a)	21100-234
2c	100	Cheesehead screws with hexagon socket M 5 × 12	St, nickel-plated	for horizontal rails to support member (Pos. 1c)	21100-575
3	100	Cheesehead screws with slot M 2.5 × 12	St, nickel-plated	2 pieces required per support member	21100-148
4a	1	Partial width front panel 6 U/ 2 HP without notch ¹⁾	Al, anodised Aluminium anodised, clear, cut edges plain	Further description see under plug-in units/partial width front panels	30818-741
4b	1	Partial width front panel 6 U/ 2 HP with notch ¹⁾	Al, anodised		30818-747
			Aluminium anodised, clear, cut edges plain		30817-034
			Al/painted, RAL 7032		30818-701
5a	100	Collar screws with slot M 2.5 × 11	nickel-plated black	for mounting partial width front panels (item 4)	30817-033 21100-379 21100-590
5b	100	Pozidrive collar screws M 2.5 × 11	nickel-plated	21100-748	
			black	21100-749	
6	100	Washers 2.7	PA-6		21101-121

¹⁾ For further information see notch

- Horizontal Rails Information2.36.0
- Horizontal Rails Front2.36.4
- Horizontal rail for HL handle2.36.6
- Horizontal Rails Rear/Central2.36.6
- Z and perforated rails2.36.11
- T – Insulation Strip2.36.12
- Threaded inserts2.36.13
- Board locking2.36.14
- Cable channel2.36.14
- Identification strip 84 HP2.36.14
- Identification holder2.36.14
- Adapter brackets2.36.15
- Device handle2.36.15
- Universal handle2.36.15
- Subrack conversion kit2.36.16
- Subrack conversion kit 6 U/84 HP2.36.17
- 6 U/2 HP partial width front panel2.36.17
- Subdivide Mounting Height 6 U or 9 U2.36.18
- Notch2.36.21
- Shielding panel2.36.22
- Chassis plate2.36.22
- Cover plate 84 HP2.36.23
- Covers on the rear side2.36.24
- Guide rails2.36.26
- Printed circuit board accessories2.36.30
- Slide nut2.36.32



europac accessories

Case 2.10.0

Subrack 2.20.0

europacPRO 2.21.0

europacPRO integral 2.22.0

europac 2.30.0

europac rational 2.31.0

europac lab 2.32.0

europac mobile 2.33.0

europac special 2.34.0

europac lab HF 2.35.0

europac accessories 2.36.0

metripac 2.40.0

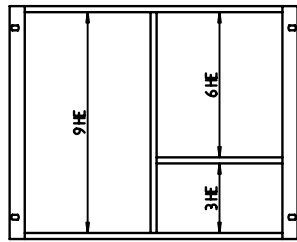
19" chassis 2.50.0

Modules 2.60.0

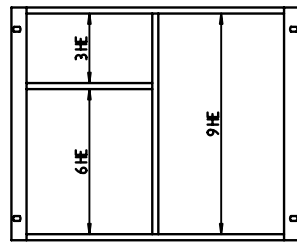
Accessories 2.70.0

Appendix 2.80.0

Mounting height 9 U subdivided
Version 1

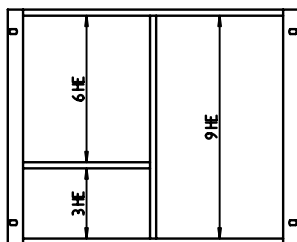


BZA42768

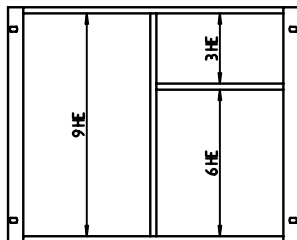


BZA42769

Version 2



BZA42770



BZA42771

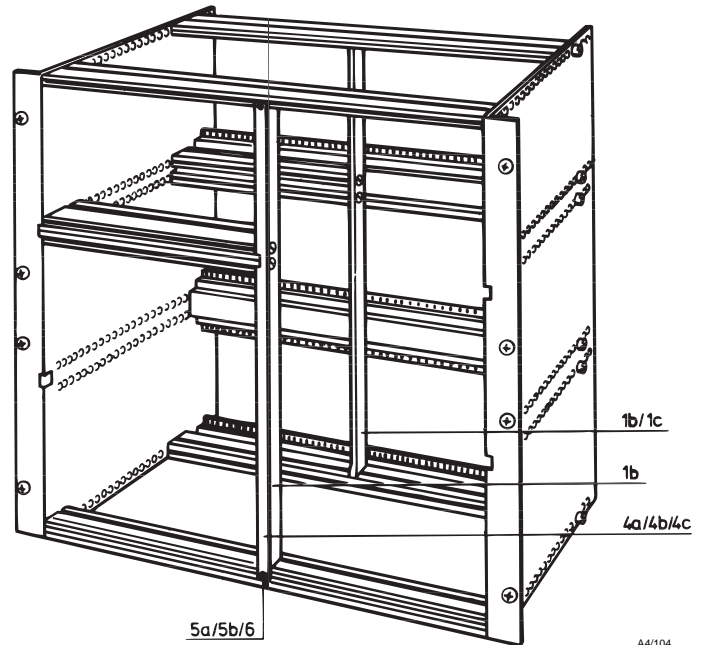
Individual parts 9 U

Shortened horizontal rails ("rails" length = required mounting width $w + 1$ HP) see overview

Please order threaded inserts separately

Note

Select the "partial width front panel 2 HP with notch" version appropriate for the location of the mounting height 3 U (see drawing).

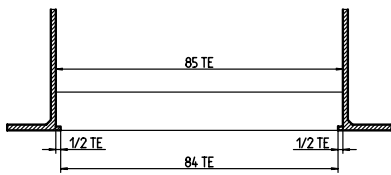


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Item	Qty	Description	Material/finish	Remarks	Order no.
1b	1	Standard support member 9 U	Aluminium extrusion, clear chromated	2 support members necessary per subrack	30897-203
1c	1	Support member 9 U	Aluminium extrusion, clear chromated		30819-988
2c	1 kit (100 pieces)	Cheesehead screws with hexagon socket M 5 × 12	St, zinc-plated	For horizontal rail to support member (item 1b)	21100-575
3	1 kit (100 pieces)	Pozidrive c/sk screws, M 2.5 × 12	St, zinc-plated	For horizontal rails to support member, depth (1c), 2 pieces required per support member	21100-234
5a	1 kit (100 pieces)	Collar screws with slot M 2.5 × 11	nickel-plated black	For mounting partial width front panels (item 4)	21100-379
5b	1 kit (100 pieces)	Pozidrive collar screws M 2.5 × 11	nickel-plated		21100-748
			black		21100-749
6	1 kit (100 pieces)	Washers 2.7 × 5 × 1	PA-6		21101-121

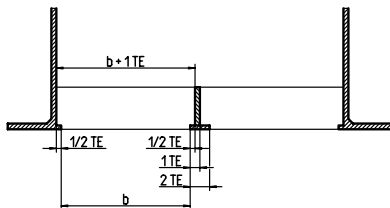


Usable width 19" = 84 HP



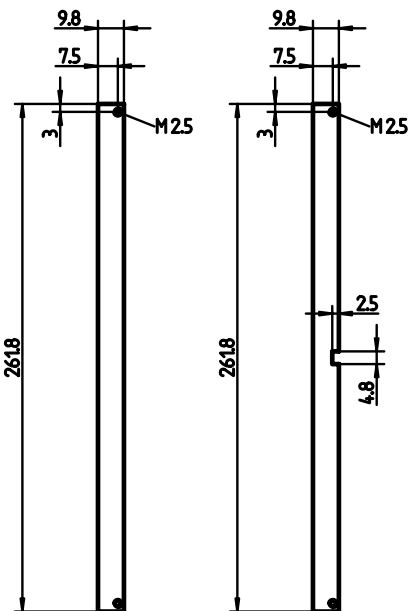
BZA42747

Usable width = w



BZA42748

Partial width front panels 2 HP



6 U
without notch

with notch

BZA42745

Notch

The 19" standard specifies the mounting width on the front of a subrack must be clear. E. g. at 19" width 84 HP (84 × 5.08 mm).

In order to adhere to the minimum distances specified in the Standard (e. g. for air gaps and creepage distances) ½ HP has to be kept free between the opening and side panels.

If the mounting width is subdivided the same conditions also apply for the support member and partial width front panel 2 HP for covering the support member.

As the horizontal rails run right up to the side panel (support member) either the "lip" of the front horizontal rails or the ½ HP wide cover must be "notched".

Horizontal Rails	
Information	2.36.0
Horizontal Rails	
Front	2.36.4
Horizontal rail for HL	
handle	2.36.6
Horizontal Rails	
Rear/Central	2.36.6
Z and perforated	
rails	2.36.11
T – Insulation	
Strip	2.36.12
Threaded inserts	2.36.13
Board locking	2.36.14
Cable channel	2.36.14
Identification strip	
84 HP	2.36.14
Identification	
holder	2.36.14
Adapter brackets	2.36.15
Device handle	2.36.15
Universal handle	2.36.15
Subrack conversion	
kit	2.36.16
Subrack conversion kit	
6 U/84 HP	2.36.17
6 U/2 HP partial width	
front panel	2.36.17
Subdivide Mounting	
Height 6 U or 9 U	2.36.18
Notch	2.36.21
Shielding panel	2.36.22
Chassis plate	2.36.22
Cover plate	
84 HP	2.36.23
Covers on the rear	
side	2.36.24
Guide rails	2.36.26
Printed circuit board	
accessories	2.36.30
Slide nut	2.36.32



europac accessories

Case 2.10.0

Subrack 2.20.0

europacPRO 2.21.0

europacPRO

integral 2.22.0

europac 2.30.0

europac rational 2.31.0

europac lab 2.32.0

europac mobile 2.33.0

europac special 2.34.0

europac lab HF 2.35.0

europac

accessories 2.36.0

metripac 2.40.0

19" chassis 2.50.0

Modules 2.60.0

Accessories 2.70.0

Appendix 2.80.0

Dimensions in mm				
	for board-depth	H	t	D
3 U	160	112,5	123,4	162,5
3 U	220	112,5	183,4	222,5
6 U	160	245,9	123,4	162,5
6 U	220	245,9	183,4	222,5

Shielding panel

- Increase in electromagnetic shielding
- Assembly to horizontal rails (4 screws, 4 shakeproof washers)
- Space requirement on the component side 1 mm
- For separation within the subrack

Note

Steel plate, 1 mm

Surface

Zinc-plated, white

Item	Qty	Description	Board depth mm	Order no.
1	1	Shielding panel 3 U	160	30820-099
			220	30820-100
		Shielding panel 6 U	160	30820-101
			220	30820-102
2	100 units	Cheesehead screw M 2.5 × 8		21100-140
3	100 units	Shakeproof washer		21100-142

Chassis plate

- For mounting heavy components

Usable in the following products:

- Subrack europac lab
- compac case
- cardpac case
- ratiopac case
- propac case

Chassis plates are mounted to the side panel 10x grid holes. They can also be mounted under guide rails (non-reinforced version), so that, for instance, it is possible to have a card subrack and the mounting for a transformer next to one another. Board retainers may be used without any limitations.

Material: Al 2 mm.

Width W		For board height	Depth	Order no. for 1 unit
42 HP	218 mm	160 mm	93 mm	30821-611
		220 mm	153 mm	30821-612
		340 mm	273 mm	30821-614
84 HP	431.4 mm	160 mm	93 mm	30821-619
		220 mm	153 mm	30821-620
		340 mm	273 mm	30821-622

Mounting parts

Qty	Description	Material	Surface
100 pieces in each case	Pozidrive flathead screw M 4 × 6 with cross recess;	steel	nickel-plated
	Shakeproof washer	steel	zinc-plated

Order no. **21100-952**



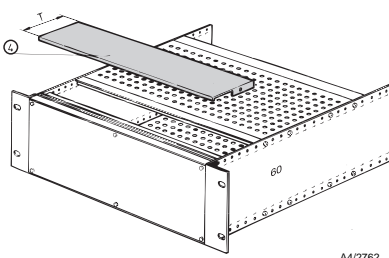
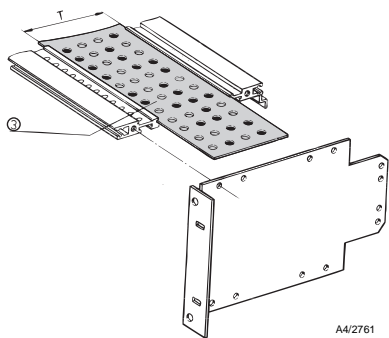
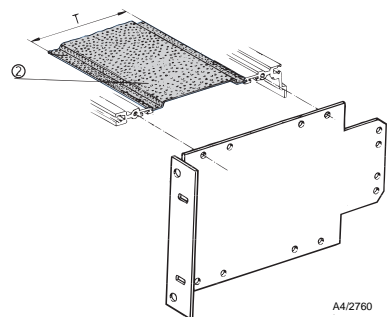
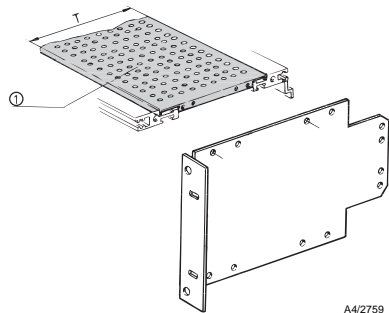
Cover plate 84 HP

Cover plates provide mechanical protection

- ① For all subracks
 - mounting to the side panel
 - can be mounted subsequently; without disassembling the subrack
- ② For subracks with horizontal rails in lightweight versions
 - Mounting in the horizontal rail grooves
 - not usable with guide rails for board height 4.4" (111.7 mm)
- ③ For subracks
 - Mounting in the horizontal rail grooves ¹⁾
 - not usable with guide rails for board height 4.4" (111.7 mm) or reinforced versions
- ④ Only for europac lab with 60 mm recessed installation
 - Mounting to the side panel
 - can be mounted subsequently; without disassembling the subrack

1) Note

Same horizontal rail version necessary
(e. g. "lightweight version" front and rear)



Item	Description	Board height (mm)	D mm	Material	Finish	Order no. (1 piece)
1	Cover plate to screw on (incl. assembly part kit)	160	131,4	Al 1 mm	clear chromated	20817-334
		220	191,4			20817-336
2	Cover plate for sliding in	160	110,0	Al perforated plate 1.2 mm		30818-742
		220	170,0			30818-744
3	Cover plate for sliding in	160	110,0	Al perforated plate 1.2 mm		30819-323
		180	130,0			30819-441
		220	170,0			30819-324
4	Cover plate for europac lab/lab special, with 60 mm recessed installation		38,7	Al 1 mm	clear chromated	30826-287
5	Assembly kit for cover plate (4) Cross recess screws M 4 x 6 with shakeproof washers					21100-952 100 pieces in each case

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- Horizontal Rails Front2.36.4
- Horizontal rail for HL handle2.36.6
- Horizontal Rails Rear/Central.....2.36.6
- Z and perforated rails2.36.11
- T – Insulation Strip2.36.12
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- Subrack conversion kit.....2.36.16
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- Notch.....2.36.21
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- Covers on the rear side2.36.24
- Guide rails.....2.36.26
- Printed circuit board accessories2.36.30
- Slide nut.....2.36.32



europac accessories

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europac lab 2.32.0

europac mobile 2.33.0

europac special 2.34.0

europac lab HF 2.35.0

europac accessories 2.36.0

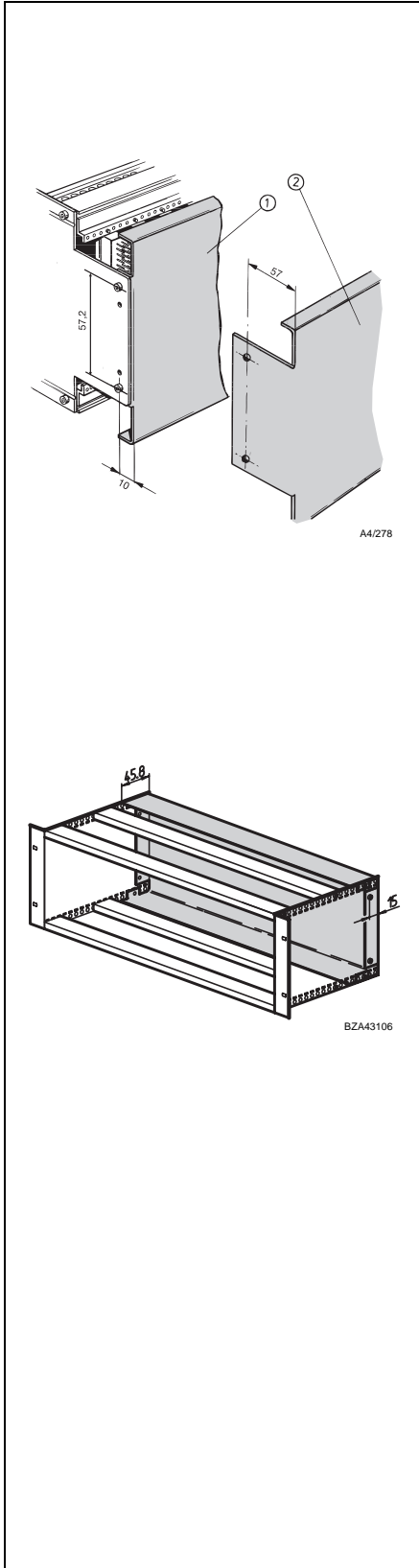
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Covers on the rear side

Covers on the rear side function as mechanical protection to the wiring side and for mounting periphery connectors.

The following covers are available:

- Protective hood for assembly to side panels for subracks: europac rational and europac lab
- Rear panel for assembly with mounting bracket on subracks: europac lab
- Hinged rear panels for assembly to extension plates or horizontal rails on subracks: europac rational and europac lab

Protective hood 3 U for europac rational

Item	Description	Order no.
1	Protective hood	20817-077
2	Protective hood recessed	20817-185

Delivery comprises

Qty	Description	Material	Surface
1	Protective hood	Al 1.5 mm; recessed: Al 2.5 mm	clear chromated
1 Set	Mounting parts		

Protective hood 3 U for europac lab

Please order assembly kit separately.

Order No. 3 U **30826-288**

Delivery comprises

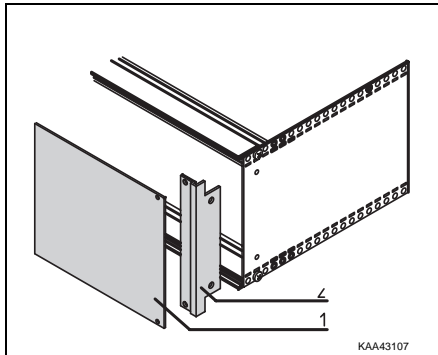
Qty	Description	Material	Surface
1	Protective hood	Al plate 1 mm	clear chromated
1 Set	Mounting parts		

Qty	Description	Material	Surface
100	Cross recess screw M 4 x 6	steel	zinc-plated
	Shakeproof washer	steel	zinc-plated

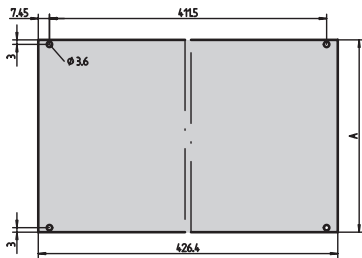
Order no. **21100-952**

Note

4 screws are required for the 3-U rear hood, 8 screws are required for the 6-U rear hood.



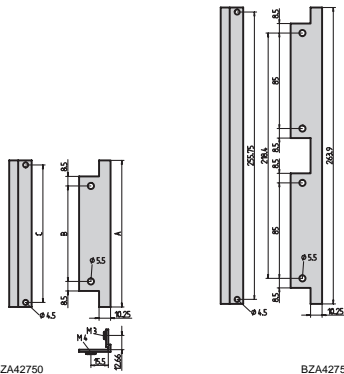
KAA43107



KAA43107

3, 4 HE

6 U



BZA42750

BZA42751

	Dimensions (mm)		
	A	W	C
3 U	130,5	85	122,4
4 U	174,9	129,5	166,8

Rear panel 84 HP for europac lab

Delivery comprises

Item	Qty	Description	Material	Surface
1	1	Rear panel 84 HP	Al 3 mm	anodised

Dimensions	Dimension A (mm)	Order no.
		3 U
4 U	172,8	30825-469
6 U	261,7	30825-425

Mounting bracket for printed rear panel

- Mounting brackets are mounted to the side panel of the europac lab.

Note

2 brackets are required for mounting a rear panel.

	Order no.
3 U	30825-433
4 U	30825-471
6 U	30825-004

Delivery comprises

Item	Qty	Description	Material	Surface
2	1	Mounting bracket	Aluminium extrusion	clear chromated

Assembly parts

- For mounting a rear panel and the bracket to the side panels.

	Order no.
3 U	21101-329
4 U	21101-329
6 U	21101-330

Rear panel 84 HP (folding)

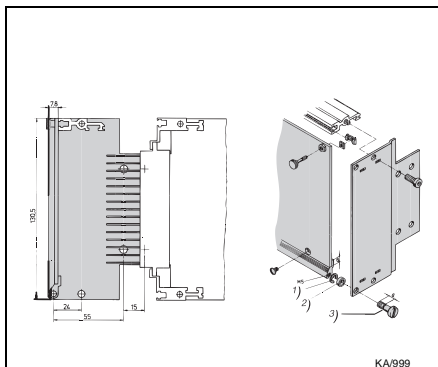
- For europac rational and europac special with protection of the wiring plane
- Assembly to additional horizontal rail

Order No. 3 U **20817-321**

Delivery comprises

Qty	Description	Material	Surface
1	Rear panel	Al 2.5 mm	anodised
1	Hinge	Aluminium extrusion	anodised
1	Horizontal rail	Aluminium extrusion	anodised
2	Extension plate	Al 2 mm	clear chromated
1 kit	Assembly kit		

Delivery: In kit form



KA999

Note

- 1) C-clip
- 2) Plastic washer
- 3) Special screw with C-clip

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- Universal handle .2.36.15
- Subrack conversion kit.....2.36.16
- Subrack conversion kit 6 U/84 HP2.36.17
- 6 U/2 HP partial width front panel2.36.17
- Subdivide Mounting Height 6 U or 9 U .2.36.18
- Notch.....2.36.21
- Shielding panel ...2.36.22
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europac special 2.34.0

europac lab HF 2.35.0

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Guide rails

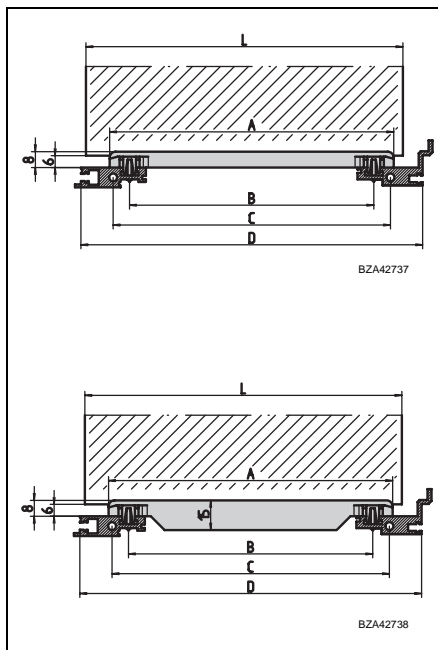
- Single guide rails
- Guide rails with integrated connector mounting according to EN 60603 (DIN 41612)
- guide rails for board height 4.4" (111.7 mm)
- Guide block with fixed board pitch (3 HP and 4 HP)
- Universal guide rails for individual board depth

Single guide rails

Board depth (mm)	Groove width (mm)	Version		Version with board fixing		Version for high loading capability	Version with ESD clip	Version universal with AI middle part bolt-on
		lightweight	Standard	snap-in	bolt-on			
100	2	-	60817-015	-	-	-	-	-
160	2	60817-064	60817-103	60817-001	60817-053	60817-102	20817-368	-
	2,5	-	60817-076	-	-	-	-	-
180	2	-	-	60817-026	-	-	-	-
220	2	-	60817-149	60817-016	60817-083	60817-085	20817-369	-
	2,5	-	-	-	-	60817-098	-	-
280	2	-	-	-	-	60817-080	-	-
340	2	-	-	-	-	-	-	20825-120
400	2	-	-	-	-	-	-	20825-121

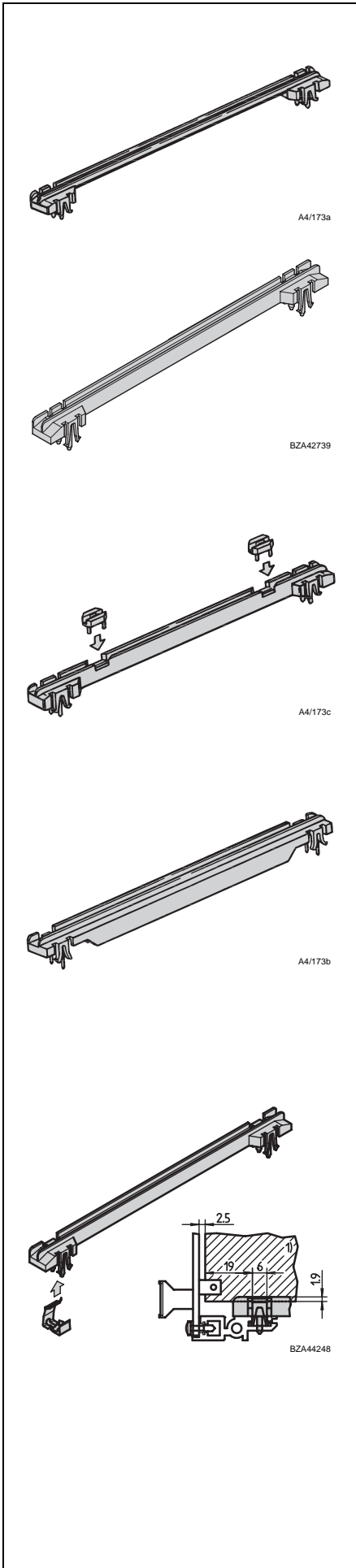
Note

The required accessories and detailed description of the guide rails are given on the following pages.



Guide rail dimensions

Board depth L	Dimensions (mm)			
	A	W	C	D
100	83,4	63,4	80	112,24
160	143,4	123,4	140	172,24
180	163,4	143,4	160	192,24
220	203,4	183,4	200	232,24
280	263,4	243,4	260	292,24
340	323,4	303,4	320	352,24
400	383,4	363,4	380	412,24



Guide Rail

■ Guide rail (lightweight version)

Board depth (mm)	Groove width (mm)	Material	Colour	Order no. (1 piece)
160	2	PPO UL 94 V-0	black	60817-064

■ Guide rail (standard version)

Board depth (mm)	Groove width (mm)	Material	Colour	Order no. (1 piece)
100	2	PBTPUL 94 V-0	black	60817-015
160	2	PBTPUL 94 V-0	grey	60817-103
	2,5	PPO UL 94 V-0	black	60817-076
220	2	PBTPUL 94 V-0	grey	60817-149

■ Guide rail (with brackets for anti-vibration clips)

- Anti-vibration clip for enhanced fixing of plug-in units
- Groove width 2 mm

Item	Qty	Description	Board height (mm)	Material	Colour	Order no. (1 piece)
1	1	Guide rail	160	PPO UL 94 V-0	black	60817-001
			180			60817-026
			220			60817-016
2	10	Anti-vibration clip		PPO UL 94 V-0	red	21100-553
	100		21100-554			

■ Guide rail (reinforced version) **Note**

- for heavy plug-in units
 - Groove width 2 mm
- Assembly of horizontal rails under guide rails is not possible.

Board depth (mm)	Groove width (mm)	Material	Colour	Order no. (1 piece)
160	2	PBTPUL 94 V-0	black	60817-102
220				60817-085
280				60817-080
220	2,5	PPO UL 94 V-0		60817-098

■ Guide rail (with ESD clip)

- For conducting static charges **Note** whilst the board is being pushed in Horizontal rails with a conductive finish must be used.
- Low-ohmic and lowinductive earth connection during operation **Delivery:** assembled
- Contact in board margin (see diagram)

Board depth (mm)	Groove width (mm)	Material	Colour	Order no. (1 piece)
160	2	PBTP UL 94 V-0/ St tin-plated	grey	20817-368
220	2	PPO UL 94 V-0/ St tin-plated	grey	20817-369

All other single guide rails including with an ESD-Clip are available upon request.

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- Horizontal Rails Front2.36.4
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- Horizontal Rails Rear/Central.....2.36.6
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europac special 2.34.0

europac lab HF 2.35.0

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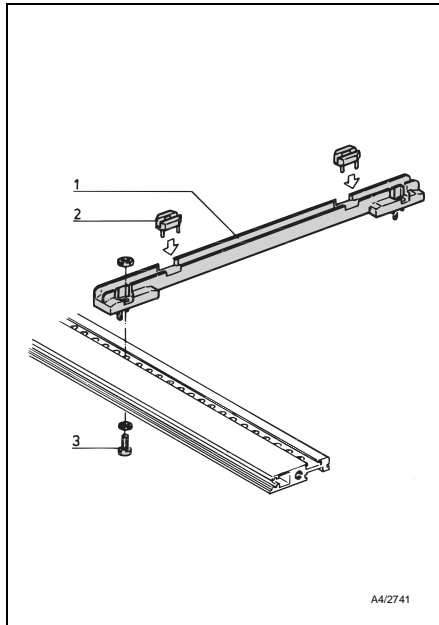
metripac 2.40.0

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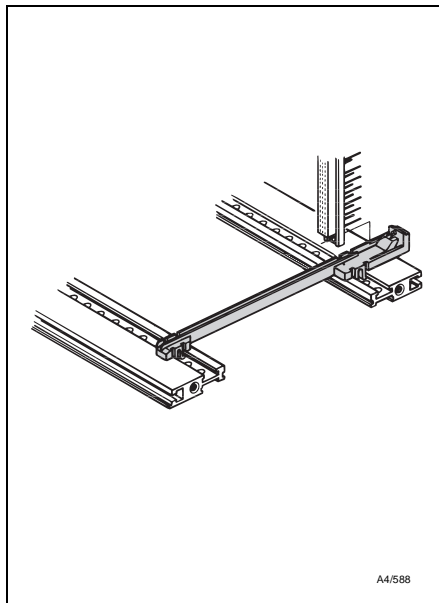
Appendix 2.80.0



Guide rail, screw on

- Anti-vibration clips for increased fixing of plug-in units
- Groove width 2 mm

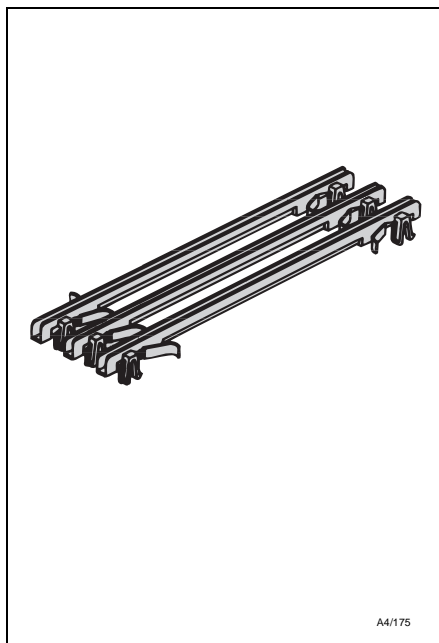
Item	Qty	Description	Board height (mm)	Material	Colour	Order no.
1	1	Guide rail to screw on	160	PPO UL 94 V-0	black	60817-053
			220			60817-083
2	10	Anti-vibration clip		PPO UL 94 V-0	red	21100-553
	100					21100-554
3	1 kit (50 guide rails)	Mounting parts				21100-158



Guide rail with integrated connector mounting according to EN 60603

- As replacement for Z-rails or horizontal rails with Z
- for single euroboard format 100 × 160 mm or 100 × 220 mm; not suitable for double euroboard format
- Simple female connector assembly with catches
- Delivery in pairs as the top/bottom versions differ
- Groove width mm 2

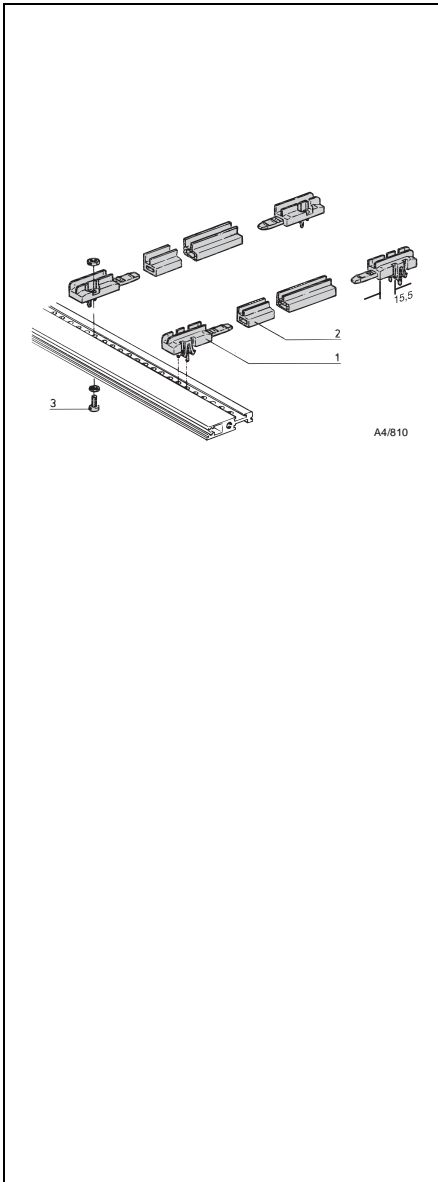
Board depth (mm)	Material	Colour	Order no. (1 pair)
160	PBTB UL 94 V-0	red	60817-078
220			60817-079



Guide block for 84 HP

- 3-HP grid with 28 pin positions
- 4-HP grid with 21 pin positions
- Groove width mm 2

Pitch	Board depth (mm)	Material	Colour	Order no. (1 piece)
3 HP (28)	160	PPO UL 94 V-0	grey	60817-057
	220			60817-043
4 HP (21)	220	PBTB UL 94 V-0		60817-105



Universal guide rail

- 1 pair end pieces and 1 rail piece
- End pieces for engaging or screwing to the horizontal rail

Item	Qty	Description	Length (mm)	Groove width (mm)	Material/finish	Order no.
1	1 pair	End piece		2	PPO UL 94 V-0 black	60817-139
				2,5		60817-140
	End piece to screw on	2	60817-091			
2	1	Profile	1000	2	PPO UL 94 V-0 Aluminium extrusion anodised	60817-193
				2		30817-446
				2,5		30817-001
2	1	Profile, prepared for board depth 160 mm	92.4	2	Aluminium extrusion, anodised	30825-608
		Profile, prepared for board depth 220 mm	152,4	2		30825-607
3	1 kit (for 50 guide rails)	Assembly part kit to screw on				21100-158

Assembled universal guide rail to screw on

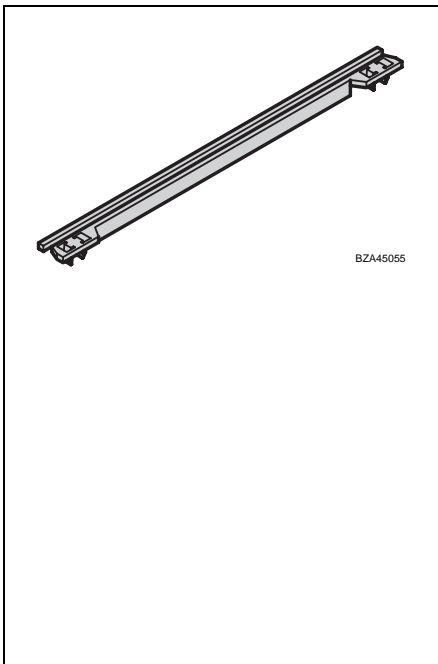
- Completely assembled for board depth 340 mm and 400 mm to screw on

Length (mm)	Groove width (mm)	Material	Order no. (1 piece)
340	2	End piece: PPO UL 94 V-0, black Middle part: Aluminium extrusion, anodised	20825-120
400			20825-121

Guide Rail for Board Height 4.4" (111.7 mm)

Delivery comprises

Board depth (mm)	Groove width (mm)	Material	Order no. (1 piece)
160	2	PPO UL 94 V-0, black	60817-038



- Horizontal Rails Information2.36.0
- Horizontal Rails Front2.36.4
- Horizontal rail for HL handle2.36.6
- Horizontal Rails Rear/Central.....2.36.6
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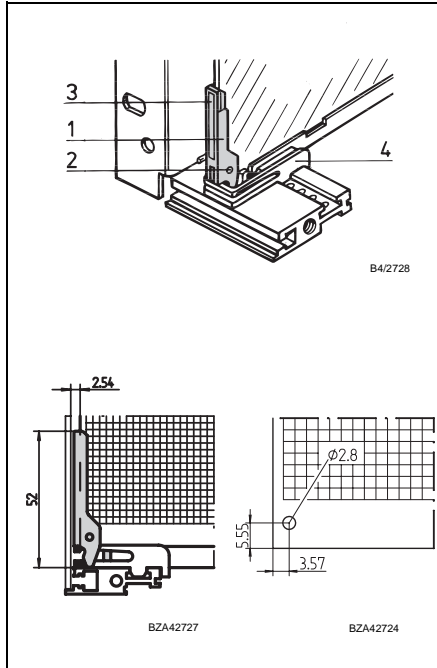
Printed circuit board accessories

- Handles
- Retainers
- Mounting parts

Printed circuit board handle

- For assembly to printed circuit boards only together with printed circuit board retainer A
- Insert/extraction function only together with printed circuit board retainer A
- Assembly behind front panels

Item	Qty (Piece)	Description	Material	Colour	Order no.
1	1	Printed circuit board handle	PBTP UL 94 V-0	red	60817-096
2	100	Assembly pin	Stainless Steel		21100-671
3	100	Label strips	Polyester film self-adhesive	mat silver	21100-672



printed circuit board retainer A

- Assembled to upper and lower horizontal rail
- printed circuit board retainer only together with printed circuit board handle order no. **60817-096**

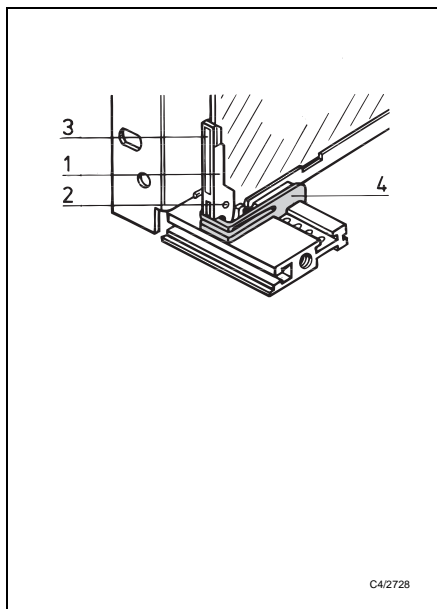
Item	Description	Material	Colour	Order No. (1 piece)
4	printed circuit board retainer A for top and bottom	PPO UL 94 V-0	red	60817-097

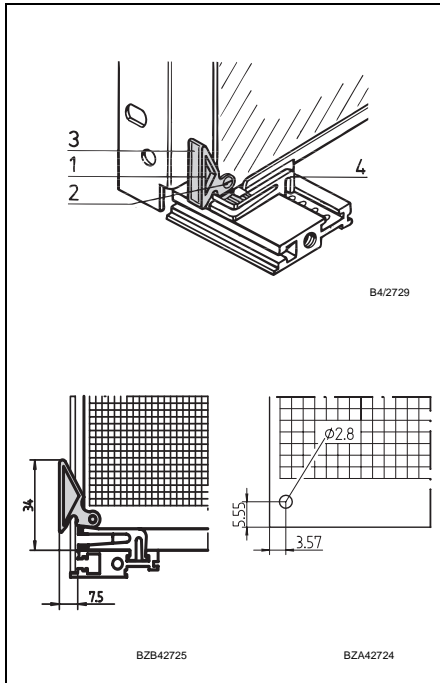
Note

Not usable:

- with europac PRO
- for guide rails with screw connection
- with guide blocks
- with front lightweight horizontal rails with slide in cover plate

Minimum distance of guide rails 3 HP.

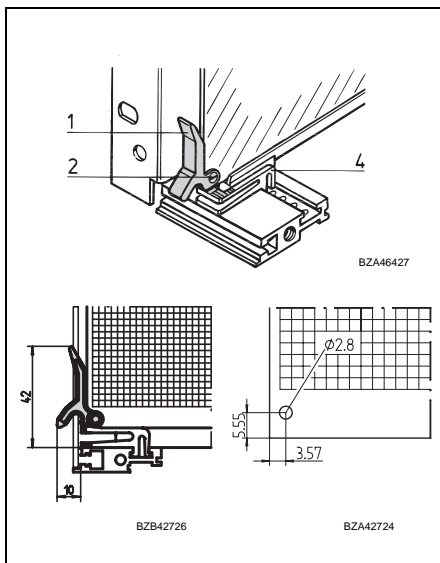




Printed circuit board handle

- To screw on or rivet to printed circuit boards together with printed circuit board retainer B
- Only used as an extraction function, the printed circuit board retainer is also opened when the handle is operated
- Labeling option

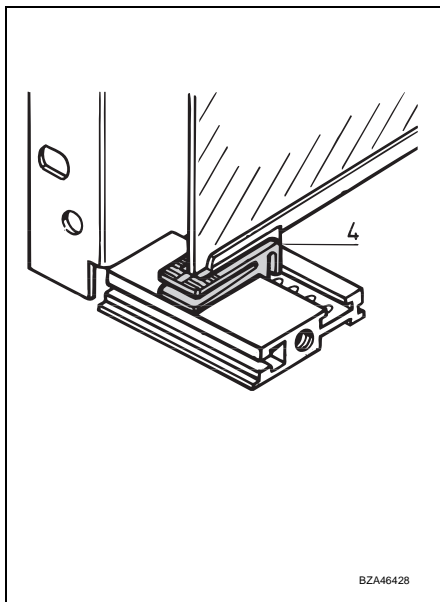
Item	Description	Material	Colour	Qty (Piece)	Order no.
1	Printed circuit board handle to screw on	PBTPUL 94 V-0	red	1	60817-067
	Printed circuit board handle to rivet on				60817-072
2	Countersunk screw M 2.5 × 6	Steel, nickel-plated DIN 965		100	21100-515
	Rivet A 2.5 × 7	Brass, DIN 7340			21100-076
3	Label strips	Polyester film self-adhesive	white	100	21100-569



Printed circuit board handle

- To rivet on to printed circuit boards together with printed circuit board retainer B. Can only be used on the lower horizontal rail.
- Version only used as an extraction function, the printed circuit board retainer is also opened when the handle is operated.
- Labeling option

Item	Description	Material	Colour	Qty (Piece)	Order no.
1	Printed circuit board handle	PBTPUL 94 V-0	red	1	60817-055
2	Cheesehead screw with slot M 2.5 × 6	Steel, nickel-plated DIN 84		100	21100-146



Printed circuit board retainer B

- Assembled to upper and lower horizontal rail
- Can also be used without a printed circuit board handle
- Can also be used with guide blocks

Item	Description	Material	Colour	Order No. (1 piece)
4	Printed circuit board retainer B bottom	PPO UL 94 V-0	red	60817-054
	Printed circuit board retainer B top		black	60817-071

Note
Not usable with europac PRO.

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europac lab HF 2.35.0

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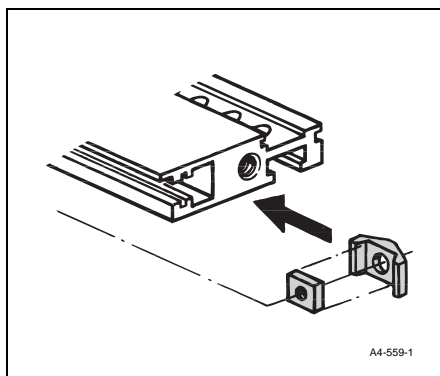
metripac 2.40.0

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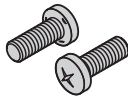









Slide nut

Flexible mounting possibility on horizontal rail

Material: Square nut made of steel; slide made of polyamide

Dimension		Surface	Square nut with slide	
			1 kit =	Order no.
M 2.5	SW 5	nickel-plated	100	21100-425
	SW 7	zinc-plated	100	21100-112
M 3	SW 7	zinc-plated	100	21100-289
			100	21100-087
M 4	SW 7	nickel-plated	20	21100-083

Description	Use	Dimensions	Surface	Order no. 1 kit (100 pieces)
Cheesehead screw with hexagon socket and low profile, head  AZA45184	Horizontal rails to the side panel	M 5 × 12	zinc-plated	21101-057
Taptite screw pozidrive, selflocking  AZA45183	Horizontal rails to the side panel	M 5 × 12	zinc-plated	21100-788
Taptite screw with hexagon socket  AZA45184	Horizontal rails to the side panel			21100-457
Grub screw, DIN 553  AZA45181	Threaded inserts on horizontal rails	M 2.5 × 8	nickel-plated	21100-276
Hexagon nut, DIN 934  AZA43239		M 3	zinc-plated	21100-219
		M 4	zinc-plated	21100-211
Plastic washer (ABS) M 6  AZA43666	19"-chassis	M 6	Colour: black	21100-016
	19" front panel			
Washer, plain  AZA45178	19"-chassis	A 6.4	nickel-plated	21100-008
	19" front panel			
Washer, bevel  AZA43666	19"-chassis	B 6.4	bright chrome (acrolite method)	21100-104
	19" front panel			
Shakeproof washer  AZA45180		A 3	zinc-plated	21100-206
		A 4	zinc-plated	21100-207

